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THE

RETROSPECT

OF

PRACTICAL MEDICINE AND SURGERY,

BEING A

HALF-YEARLY JOURNAL,

CONTAINING A RETROSPECTIVE VIEW OF EVERY DISCOVERY AND PRACTICAL IMPROVEMENT IN THE MEDICAL SCIENCES.

EDITED BY

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The Editor has arranged those articles on "Practical Medicine" more methodically than has been done in former volumes, according to the advice of one of our most respectable Journalists, to whom he begs to offer his thanks.

This, however, is not so essential when such a minute index of diseases and medicines is at the end of each volume.

The first seven volumes of this work are now nearly out of Print. The first four volumes will be reprinted early in 1845, and the remainder as soon as required. These new editions, however, will be simply reprints of the former volumes, so as to render the *general indices* applicable to all the different editions.

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RETROSPECT.

PRACTICAL MEDICINE.

&c. &c.

Article 1.—ON THE PATHOLOGY OF FEVER, &c.

By Robert Willis, M.D.

[Dr. Willis advances opinions respecting the cause of fever, which, if correct, seem to overturn all our preconceived notions of it,—especially with reference to its origin in those localities where we suppose marsh miasm and malaria to exist. He asserts, in fact, that *marsh miasm* and *malaria* are nothing more than *moist warm air;* and brings forward forcible arguments and facts to prove the correctness of this assertion. He reminds us of the observation of Fourcault, that an animal, healthy and uninjured, very soon dies if its body be covered with an impervious glaze. "Becquerel and Breschet, repeating the experiment of M. Fourcault, discovered that the extinction of life under the circumstances indicated was accompanied by a signal fall of temperature; the animal, whose body was endued with an impervious glaze, began to lose heat on the instant, and the loss never ceased until life had fled, when the temperature of the internal as well as external parts of the body, was found to be within 3° cent. of that of the external atmosphere, which, on the day of the experiment, indicated 17° c." None of these gentlemen have offered any other explanation of this phenomenon than the old one, that the office of the cutaneous exhalation, as a means of refrigerating the body, was gone.]

It is only when the function of the skin comes to be regarded as so intimately connected with vital manifestation, as it unquestionably is, that we are enabled to understand wherefore such serious consequences should follow its derangements. Suppressions of the cutaneous exhalation under the agency of cold, is the acknowledged cause of the greater number of the diseases to which the inhabitants of temperate countries are subject. But we have no satisfactory explanation of the way in which cold exerts its pernicious influence, or of the manner in which consequences are here linked with their

presumed cause. Without entering into the explanations that have been given of this matter, I shall merely say that in my mode of considering it, he who has suffered a *chill* has had the secreting faculty of his skin deranged or suppressed, and physiologically speaking is brought into the same condition as he would were his body more or less perfectly covered with an impervious varnish. A process indispensable to the continuance of vital action has been interfered with, and disturbance of the general health, commensurate in amount with that of the particular functional disturbance mentioned, forthwith ensues. The injury mentioned in this instance may possibly partake in its essence of the nature of inflammation. When we have the web of a frog's foot under the microscope, and prick the part with a fine needle, instantly all movement around the injured part is arrested: the blood stagnates in its channels, which dilate visibly, and by and by the several blood-corpuscles run together and form aggregated masses. The explanation of this that has been suggested is simple and satisfactory: the local injury impresses the percipient centres in a way which incapacitates them from transmitting the usual stimulus upon which depends the tone of the living tissues; these are consequently paralysed, upon which follow stasis of the blood in the blood-vessels, and all the consequent phenomena of inflammation. But the influence of cold extensively applied to the cutaneous surface is probably little different from that of other stimuli acknowledged to be efficient causes of inflammation. The effect on the peripheral nerves has a paralysing influence upon the excitomotory system for its consequence, and connected with this are suspended function, and more local or more general derangement,—in a word, disease. In this way can I render to my own mind a satisfactory account of the influence of cold in the production of disease, not only in all the colder and more temperate, but also in the hotter regions of the earth.

The problem of highest interest in medical science that waits for solution at the present moment is, perhaps, this:—*To explain the cause of the unhealthiness of so many tropical climates, and of alluvial and marshy countries generally, where the summer temperature is high.*

A particular specific contagion, designated *miasm* or *malaria*, it is familiarly known, has been imagined and is very commonly admitted as a means of accounting for the deadly fevers in especial which there prevail. But after a very careful study of the subject, I am bound to say that I entirely concur with those who, from their experience in tropical climates, have felt themselves authorised to deny the existence of any specific contagion or miasm, the product of vegetable matters in a state of decay under the combined influence of heat and moisture. As chemists, we are perfectly familiar with the products of the decomposition of vegetable substances under such circumstances, and as physiologists with the effects of the gases then evolved upon the animal economy, which certainly bear no resemblance to the phenomena of remittent and intermittent fever. According to my ideas, marsh miasm and malaria are nothing

more or less than *moist warm air,—air, excessively moist considered in connexion with its own temperature, and the temperature of the human body.*

It is comparatively easy, as is well known, to remain for a certain time in a stove-room of a temperature considerably higher than the body, *if the air be dry.* Here there is free elimination of watery vapour by the sudoriparous glands, and even as rapid solution of it by the parching air. The capillary arteries then exude, and the veins imbibe with great rapidity, so that the nutritive or vital acts are even performed with a kind of increased energy. They are so performed, however, only for a short time: excitement soon begets exhaustion, the body rises in temperature, and death is the necessary consequence of protracted continuance in the circumstances indicated.

The consequence is the same, but the way in which it is brought about is different, when *the air of the stove-room is moist.* M. Delaroche, in his second set of experiments, in which moist instead of dry air was employed, ascertained that temperatures a degree or two centigrade short of those, or just equal to those, of the animals which were the subjects of experiment, were felt as more speedily detrimental, and then fatal, than the excessively high temperatures with dry air, which he had already approved. Wherefore this should be the case will be readily understood in connection with the views which I have taken of the function of the skin. In a hot, dry atmosphere, animals perish from the effects of excitement; in a warm, moist air, of a temperature no higher than that of their own bodies, they die as they do when covered with an impervious glaze—the conditions requisite to the access of oxidized plasma, and the removal of deoxidized plasma, are wanting, and life ceases as a matter of course.

Now it is highly interesting to observe that the air of unhealthy intertropical climates differs little from that of a vapour-bath at between 80° and 90° Fahr. The dew-point of the atmosphere in these countries appears, in general, to be not more than four or five degrees, and frequently not more than a single degree, Fahrenheit, below the temperature of the ambient air. Were the temperature between 90° and 100° Fahr., and the dew-point in the same proportion high, man could not by his nature continue to exist for more than a very few hours. In a country having a high mean temperature, say of about 80° Fahr., and an atmosphere that is close upon the point of saturation with humidity, which is precisely what obtains on the western coast of Africa, to quote a single instance, man is evidently on the verge of circumstances that are even incompatible with his existence. He has but to be exposed to fatigue and the burning rays of the sun to be actually brought into such circumstances. The surrounding atmosphere cannot take up the watery vapour, which is then presented to it in large quantity by the sudoriparous glands with sufficient rapidity to meet the wants of the system, in its state of excitement, and requiring the freest access of the

most thoroughly oxygenated plasma to keep up movement and life in its several constituent atoms. Great general derangement—*Fever*—ensues, and life is almost of necessity the forfeit.

I have no doubt but that the simple excitement which follows exposure to the sun's heat, in connection with the humidity of the atmosphere, will be found to explain what has been spoken of by writers on the diseases of tropical countries under the title of *solar influence*, by which they understand a certain mysterious and maleficent power emanating from the sun, and distinct from his light and heat. With the view which has just been given of the function of the skin, all that was mysterious and unintelligible in the doctrines of malaria and solar influences disappears, or merges into what is perfectly natural and comprehensible.

The *lunar influence*, in like manner—for some have thought that there was a peculiar maleficent influence in the moon as well as in the sun—will come to be nothing more than the effects of the relatively increased moistness of the air which follows the fall in the temperature of the night season: the air loses several degrees of heat, and in the same, or nearly the same proportion, it gains in degrees of moistness; growing relatively to its temperature more and more humid, it is soon in the state in which it can not only dissolve no more watery vapour, but in which it begins to deposit what is already held in solution: hence the heavy dews of unhealthy intertropical climates, and of marshy temperate countries generally, and the deleterious effects which exposure to the night air produces upon the frame of man. The rapidity with which moist air even of 68° or 70° F. abstracts heat from the body, must also be taken into the account. It is very easy to have a decided chill as the first element in the derangement, *i. e.* in the fever, which is so apt to ensue under such circumstances. And then, if the remarkable fact first ascertained by that admirable observer, Dr. Davy, be added, that under fatigue the temperature of the body actually *falls*,—it does not rise, as the sensations seem to indicate,—it strikes me that we are no longer under the necessity of recurring to any unknown and hypothetical agent as the cause of the diseases which arise under exposure to atmospherical inclemencies, whether of heat or cold, especially when the exposure is conjoined with fatigue. On setting out on a journey in the Island of Ceylon, Dr. Davy ascertained the mean temperature of his palanqueen bearers to be 98·9° Fahr. under the tongue; on calling a halt at different times as he proceeded, he found it successively 93·6° and 98·5°; doubtless, had he pushed these men beyond their powers, their temperature would have fallen still lower, and, in all likelihood, he would have had them down in fever. Dr. Davy himself observes, in connection with this subject, on the instances of sudden death that have occurred from drinking cold water, or from plunging into cold water after exhausting fatigue, and when the body is commonly said to be heated. Probably, in such cases, in conformity with the above observations, the temperature of the body had been actually reduced below its natural

standard, and the fatal effect may be the consequence. This, in fact, was the view that was taken by Currie, who, in his reports, has collected many examples of the kind, and amongst them has quoted that interesting and impressive catastrophe which befel the army of Alexander the Great on the banks of the river Oxus, where, according to Quintus Curtius, the loss of life was actually greater than had been experienced in any single battle. The circumstances of the case were—a forced march of forty-six miles, in hot weather, over a desert; excessive thirst and exhaustion, and in this state drinking large draughts of cold water

The importance of the state of the skin in different diseases, in connection with their tendency, is well known to practitioners. What surgeon does not feel confident that his patient is going on favourably, after even the severest operation, if his skin but continue soft and velvety? and it is the same in almost all diseases.

[Hence we perceive the necessity in most febrile diseases, and especially in scarlatina, of restoring the functions of the skin.]

The means of accomplishing this are various. I have found a full emetic dose of ipecacuanha and tartrate of antimony suffice to interrupt the disposition to coma, which was effectually prevented from recurring afterwards by the ordinary diaphoretic mixture of acetate of ammonia and camphor julep, with fifteen or twenty minims of the antimonial wine, repeated at intervals. A case that looks threatening as the disease is acquiring its status will often be rendered manageable and even mild by this simple means. Another very important measure is the reduction of the superficial temperature. The patient should be kept covered with a sheet, and have a sponge, dipped in tepid water, passed over every part of his body by the hour together, until the thermometer both in the axilla and mouth from 106° or 108° Fahr. has been brought down to 99° or 100° Fahr. This is the test that the application has been carried far enough and has been effectual. It was simply by reducing temperature and restoring the office of the skin, that the affusion of cold water, as recommended by Dr. Currie, cut short, or rather rendered safe and manageable, the acute forms of scarlatina in which he counselled it. This useful means, from its application not having been understood, has fallen into discredit with the regular practitioner. It might certainly be restored with advantage in many cases.

I am far, however, from maintaining that the means thus far indicated are the only means that would be indicated in every case of febrile disease. The first element in fever is perhaps even more commonly depression than excitement; it is pure excitement, the consequence of the inoculation of a specific morbid poison, in scarlatina; in intermittent and continued fever I believe it always to be depression; so that the means of restoring the balance would be not the farther abstraction, but the addition of stimulus.

In a conversation which I had last summer with Mr. W. F. Daniell, who had at that time had ample experience in the diseases

of Western Africa, and who is at this moment prosecuting his researches in that deadly country, he informed me that his conclusions from actual observation tallied exactly with my physiological inductions as to the cause and nature of the fever of intertropical countries. In a letter which he addressed to me on the 27th Sept. 1843, on the eve of his departure for Cape Coast Castle, and speaking of his purpose of publishing on the Diseases of Western Africa, he says: "I have stated the proximate cause of most African fevers to depend on *an impaired or deranged condition of the vital functions of the skin*, a definition which I imagine will be in conformity with your own views on the subject." It is always highly gratifying to find physiological inferences supported and borne out by practical observations, and I own that I look forward with much solicitude to Mr. Daniell's return to this country, and to the appearance of his work. Upon this occasion, I spoke to Mr. Daniell of a hot air bath as the likeliest means of cutting short a threatened attack of intermittent or remittent fever. He informed me that by directing all his attention to the state of the skin he had been eminently successful in the treatment of the African remittent. Dr. Pritchett also observed that patients in the Niger expedition did best when they were kept somewhat warmly covered; sponging with cold water, and exposure, were always followed by dryness or parching of the skin, when the patients became uneasy and nervous.

Since the preceding observations were written, M. Fourcault has still farther pursued his curious researches on the influence of the cutaneous envelope of the body and its function, which all tend to confirm and extend the conclusions come to. On covering the skin of a healthy animal with an impervious glaze, M. Fourcault finds that *albuminuria* is an invariable consequence in the dog, and a very frequent one in the rabbit. But the conclusions are so curious that they deserve to be made the subject of a special notice.

Med. Gazette, July 12, 1844, *p.* 482.

2.—ON THE PRESENT STATE OF KNOWLEDGE OF THE NATURE OF INFLAMMATION.

By T. Wharton Jones, Esq., F.R.S., &c., &c.

Retardation of the flow of blood in the small vessels with dilatation of their calibre, and at last stagnation of the blood-corpuscles in the vessels, constitute the first microscopical phenomena in the inflammatory process, as seen in the frog. There is good reason for thinking that the microscopical phenomena of inflammation are the same in man. It is generally supposed that the dilatation is primary, and the retardation of the flow of blood a physical effect of the preceding dilatation; the retardation however is greater than the dilatation will physically account for. With respect to the nature of the dilatation, it is now admitted that the dilatation of the arteries in inflammation is a state of relaxation or paralysis and not of

activity. Mr. Jones, not being satisfied that the capillaries and radicles of the veins have contractile walls, which the small arteries are believed to have, and therefore unwilling to admit primary dilatation from relaxation in them, concludes that dilatation of the capillaries and radicles of the veins is secondary to the retardation of the flow of blood in the arteries, and is owing to distension from accumulation of blood. Henle thinks that relaxation and dilatation of the vessels, with retardation of the flow of blood, act in determining stagnation of the blood, and in this way; the retarded flow of blood, together with the relaxation and dilatation of the vessels, favours the exudation of serum; hence the plasma of the blood in the part becomes inspissated by a preponderance of protein matter over the salts. This inspissation of the plasma determines endosmotic changes in the red corpuscles, in consequence of which they are disposed to aggregate. Mr. Jones does not agree with Henle in this: he conceives that the stagnation of the blood must recognize some other cause than inspissation of the plasma. Mr. Jones considers that the proximate cause of inflammation, although affecting the constitution of the blood, does not reside in the blood only, but primarily in the agency on that fluid of the solids through which it passes in the capillary vessels—he thinks this appears from the limitation of inflammatory disease to a certain locality, from its easy reproduction at a subsequent period. The appearances, he says, attending the stagnation of the red corpuscles are such as might be supposed to be the effect of a suspension of the conditions by which, in the natural state, the red corpuscles keep in the middle of the stream, neither adhering to the walls of the vessels nor to each other, and not readily entering the smallest capillaries; the effect in fact of the establishment of an attraction between the red corpuscles on the one hand and the walls of the vessels on the other, as well as among the red corpuscles themselves, instead of the absence of attraction, or of the actual repulsion which naturally exists. Emmert, by way of explaining this attraction, indicates some of the conditions attending the operation of the attraction—he points out that constriction of the capillaries (small arteries) and the attraction between the parenchyma and blood-corpuscles are in antagonism—that when the constriction of the capillaries is *great*, the attraction between the parenchyma and blood is *small;* hence no congestion. When, on the contrary, there is *relaxation* and *dilatation* of the capillaries, the attraction is great between the parenchyma and the blood; and hence accumulation and stagnation of the red corpuscles.

Mr. Jones, before expounding his theory, claims the following postulates: 1. That the constriction and dilatation of the calibre of the small arteries at least, if not of the capillaries, is owing to contraction and relaxation of their walls in virtue of their contractility or tonicity, which is dependent on the nervous system. 2. That the ordinary tone of the vessels is determined by the moderate discharge of nervous influence. 3. That the relaxation, atony, or paralysis of

the walls of the vessels on which their dilatation depends, is owing to the suspension of nervous influence. 4. That the relaxation with dilatation of the vessels from suspension of the nervous influence is the precursor of the stagnation. The theory which Henle has formed of the mode in which the exciting cause of inflammation determines the suspension of nervous influence is this: the exciting cause acts primarily on sensitive nerves, exalting their activity. The motor nerves of the vessels which have sympathetical relations with the excited sensitive nerves, are secondarily affected—this affection of the motor nerves which supervenes by reflex action on the excitement of the sensitive nerves, is one of depression, or suspension of action; of paralysis—this form of sympathy is called *antagonism.**

With respect to the inflammation of an organ occurring after section of some part of the sympathetic, Stilling refers it to paralysis of the walls of the vessels.

Exudation.—This commences immediately after or during the stagnation of the blood—it is at first serous, and afterwards pure plasma. So long as the vessels are entire, none of the corpuscles of the blood pass out or escape. With exudation is completed the inflammatory process, properly so called.

Med. Chi. Rev., July 1844, *p.* 249.

3—ON TIC DOLOUREUX.

By H. Hunt, M D.

[The frequent inefficacy in the treatment of this disease does not surprise us when we know how empirically the different remedies are applied. We think that Dr. Hunt's division is a very good and practical one; and if we can fix on the exciting cause, we may generally succeed in putting to flight one of the greatest tormentors of the human frame. In his practice tic doloureux has generally arisen from one of nine different causes:—1. From a neuralgic habit. 2. Dyspepsia. 3. Dyspepsia complicated with congestion of the liver and other viscera. 4. Anæmia. 5. Morbid action in the spine. 6. Disorder of the uterus. 7. Disease of the brain. 8. Local mechanical causes. 9. Malaria, recession of eruptions, and other causes. Dr. Forbes comments on these divisions with his usual ability, and we will take the liberty of extracting a few pithy remarks from his Review. When the disease arises from some disorder of the digestive organs, it is generally of an atonic or nervous character, rather than inflammatory. For example, a patient suddenly alters his diet from a generous to a spare one, and in other ways exhausts himself: or on the other hand he eats and drinks too much, and is by and by attacked with intense neuralgia. What should we do in these cases?]

* There is scarcely a shadow of difference between this theory, and that propounded by Dr. Billing in his First Principles of Medicine.—*Rev.*

For many years Dr. Hunt has made it a regular practice in these cases to begin with an emetic: much glairy and tenacious mucus is evacuated, which, he has not the slightest doubt, facilitates the action of the medicines, especially of arsenic. If the paroxysm is regularly intermittent, the emetic should be given an hour before the fit; and after the emetic, a warm aperient draught, of twenty grains of rhubarb and sulphate of potash; with thirty drops of sal volatile, in some aromatic water. After this, a course of arsenic, combining it with a sedative or with a few grains of the bicarbonate of potash, if there is an acid stomach, he finds the best remedy: beginning with four minims three times every day, with double the quantity of compound tinct. of camphor, and gradually increasing the dose of liq. arsenicalis, until there is some decided symptom of its action, which is commonly evinced when the dose has amounted to ten. When the pain has considerably decreased, he discontinues the medicine for a few days, and recommences with the original small doses, and finds it rarely necessary to increase them, but continues them for several weeks, if not months, after the pain is removed; for patients should be strictly cautioned against the error of thinking themselves cured as soon as the pain is relieved. They must persist in the medicine and diet until the tone of their stomachs is quite restored, or the pain will return. The susceptibility of the stomach towards this remedy is various. In some cases it must be given on a full stomach. If the pain at any time increases, the aperient should be repeated, and the quantity of arsenic increased. During the whole treatment an occasional aperient is useful. When the pain is relieved, and the stomach improved, the substitution of a grain of quinine, three times a day, is useful, although it would have disagreed at first. Large doses of iron, quinine, bark, &c., are injurious in these cases. The arsenic may disagree *immediately*, producing an indescribable sensation of distress in the stomach, dryness of the fauces, white tongue, and other symptoms of gastritis. It should be at once discontinued; and as this morbid sensibility is probably accompanied with slight inflammation of the mucous membrane, a rigidly farinaceous diet, in small quantities and lukewarm, should be ordered; with small doses of nitrate of potash, combined with two or three minims of Scheele's prussic acid, three or four times a day, and three or four grains of James's powder, at bedtime. If aperients are needed, a common lavement, a little castor-oil, or two or three ounces of Pulna water; a sinapism to the stomach, or rubefacient liniment, and an occasional blister. After a few weeks of this treatment, arsenic may be borne, and at first should be given with, or just after, meals; and if it again disagrees it should be abandoned altogether. It is more beneficial to do little than much in such cases: by being content with a proper diet, and by avoiding anything that can possibly irritate the oversensitive nerves. The attention to diet in all cases of neuralgia from dyspepsia is most important; and Dr. Hunt gives the result of his experience.

In cases of extreme sensitiveness of the stomach, the mildest food

is sometimes necessary. Such patients should live entirely on farinaceous food, until the nerves of the stomach become less sensitive; which is known by the tongue becoming cleaner, and the general feelings (better known to the patient than described,) returning to those of health. When the stomach has been thus improved, some animal food should be added, beef-tea, a chicken prepared thus: "a chicken is to be wrapt in muslin, and stewed for twelve or fourteen hours, with half an ounce of vermicelli, and a few whole peppercorns, until the whole has become a jelly; some of this, diluted, if necessary, with a little toast, forms a very nutritious and easily-digested meal." As the appetite improves, a slice of chicken or game, with stale bread or toast, &c. In such weak stomachs every kind of food has a tendency to become acid, which is in some measure prevented by some slight stimulus with or after meals; a little weak brandy and water, or a teaspoonful of sal volatile in a glass of water, or a cup of coffee.

For those less sensitive, or whose morbid sensibility has been quieted, a plain nutritious diet, of animal food, (chicken, game, mutton, and venison are the best kinds,) with stale bread or toast, and with a few well-boiled vegetables, *if they can be taken with impunity*, and there is seldom any objection to plain puddings of rice, bread, and tapioca. All fish, pastry, rich puddings, fruit, new vegetables, pickles, cheese, and various sauces, must be strictly forbidden.

Errors in quantity may be prevented by two rules; 1st, to live simply, and to avoid a variety of dishes; and, 2nd, to eat slowly, that the first indications that sufficient food has been taken may be felt and obeyed.

Water is the best drink. Some, especially those who have indulged in wine, require the stimulus of a moderate quantity, in order to digest at all. But the smallest quantity for this purpose should be taken, and as strength is gained, this allowance should be gradually diminished and discontinued altogether. A little brandy and water, or a glass or two of good sherry or sound port are the best. For breakfast, bread or toast, weak café au lait, or scalded milk, prepared by placing the can of milk on a stove moderately heated, until all the cream has risen to the surface, which is to be removed when cold. This is easily digested. Those who can digest bacon may eat it. It should be toasted after being boiled.

[When congestion of the liver and other viscera is aggravating the affection, it will be known by "the sallow, muddy complexion, with eyes half jaundiced, foul tongue, hard and tense abdomen, sluggish irregular bowels, scanty high-coloured, and turbid urine." In which case Dr. Hunt would give an emetic, followed by a brisk mercurial purge, repeated or not, according to the obstinacy of the case. It is in these cases that cistou oil is particularly efficacious, especially when it acts both as an emetic and a purgative. Afterwards he gives tonics or sedatives. Belladonna he has found most useful when the pain has been irregular; and when regularly intermitting he prefers a grain or two of solid opium, with camphor, an hour or two before the expected attack.]

Tic douloureux from anemia.—Where there is no local cause of irritation to account for the pain, nor the neuralgic habit, but where persons, naturally of a strong constitution, have a pallid skin, loss of strength, and often symptoms indicating a deficiency both in the quantity and quality of the blood, Dr. Hunt arranges the case under this division. It is this class of cases which are so much benefited by iron, continued unremittingly for months, until there is evidence of pure red blood in the system. In one case, which is detailed, of this kind, where the paroxysms were very intense, a grain of belladonna was given during the attack, and ordered to be repeated, if necessary, for three successive hours. Soon after the third pill was taken the pain began to subside. The pain did not return for a week, and then one grain checked it. In these cases belladonna is often very serviceable in allaying the general irritation of the system, as well as in checking the pain.

Tic douloureux from morbid action in the spine.—Three or four cases of very obstinate tic douloureux of the face in females fell under Dr. Hunt's care, in which he could not discover any local cause, but attributed the disease to a deranged state of the general health. All plans of treatment, and every kind of medicine failed to afford relief. Some symptoms, such as loss of power in the legs, led to an examination of the spine; much tenderness was discovered on pressing some of the vertebræ. Caustic issues were used, and the recumbent posture enjoined, with complete relief to the tic, and restoration or improvement of the general health. The duration of this treatment varied. The connexion between the state of the spine and the pain in the face could not be doubted.

[In those cases which seem to arise from disorder of the uterus, bad labours attended with flooding and followed by menorrhagia or leucorrhœa, Dr. Hunt relies much on *arsenic*. "He thinks it subdues morbid sensibility of the nerves and restrains passive menorrhagia."]

He has also found belladonna and opium, previous to the menstrual periods, useful. Cold astringent injections to the uterus and cold hip-baths, sometimes saturated with bay-salt, are valuable adjuvants. The clothing over the loins should not be too warm, and lounging on warm relaxing couches should be avoided. The possibility of the menorrhagia depending on a loaded state of the bowels should not be overlooked. To show the connexion between the uterus and neuralgia of the face still further, one case is reported in which a lady was subject to neuralgia of her face in all her pregnancies, at about the same period. It lasted about ten days, and was cured by arsenic. In another case, a paroxysm like tic came on before delivery; it was very severe during delivery, and subsided as soon as the child was born. The placenta was retained, so that extraction was necessary; as soon as the fingers reached the uterus, the pain returned, but ceased as soon as the placenta was removed, and did not return. Allusion is made to the face-ache, which always precedes menstruation in some delicate young women; and a case is given, in which a

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lady had severe neuralgia of the ulnar nerve, coming on when she was about four months advanced in pregnancy, and continuing until her confinement, after which it immediately ceased.

When there is a periodical return of tic every month, Dr. Hunt has found that it was connected with some irregularity in menstruation.

Tic doloureux from local mechanical causes. The connexion between the pain and the teeth, to which the patient so often refers his sufferings, should be carefully examined. It is useless to make the examination during the paroxysm. But if, in its absence, any tooth on pressure, or on being slightly struck with a metallic instrument, is sensitive, or the paroxysm is brought on, the tooth should be removed. In all cases decayed teeth should be extracted or stopped and stumps removed. Several cases are given of tic from diseased teeth, where either exostosis of the end of the fang, or a rough state, or the periosteal covering converted into a lamina of bone was discovered. Dr. Hunt has remarked that decay of the teeth was more frequently the consequence than the cause of tic; the teeth which were good and firm originally, becoming affected with caries at that point at the edge of the gums, where the enamel terminates. Under this head, unnatural growths of bone, local injuries of nerves, foreign substances pressing upon nerves, and the diseased state of nerves in the stump after amputation, are alluded to among the occasional causes of tic; and the propriety of keeping the general health as good as possible by giving tone and strength to the system, and by allaying irritation, insisted on even in those cases where the cause of irritation cannot be removed.

[In *periodical head-ache* which gradually assumes a very painful and neuralgic character coming on at intervals, continuing for a few hours and gradually subsiding,] Dr. Hunt commences the treatment by an emetic, followed by a purgative, after which a course of quinine or arsenic, continuing the remedy for two or three days after the pain has ceased, and repeating it for a few days at the end of a week, otherwise, as he has found, the pain is very apt to return about the tenth day. In some cases, capsicum or black pepper, combined either with the quinine or arsenic, cures more quickly than either used separately. He prefers one or two grain doses of quinine three times a day, or every six hours, to larger doses.

Sciatica.—Painful affections of this nerve, though classed under the same name are very various.

Acute inflammation of the nerve is most frequently the effect of exposure to wet and cold, standing or sitting in water, or wet ground, in boats or in coaches. The pain in the course of the nerve is very severe, aggravated by the slightest motion, and attended with high febrile symptoms. It requires strictly antiphlogistic treatment. Cupping along the course of the nerve, brisk purging with calomel, followed by salts and senna, each dose containing thirty drops of vin. colchici, or three to six grains of powdered colchicum, every five hours, until the febrile symptoms are diminished. Then ten to fif-

teen grains of Dover's powder will greatly relieve the pain; for the pain is seldom reduced in proportion to the reduction of the febrile symptoms, a point which should be remembered. At this stage, two grains of calomel, from four to six of powdered colchicum, and five of Dover's powder, should be given every six hours, with some diuretic, and an extra dose of opium at night if necessary; repeating the black draught every second morning. It is needless to add that the effect of the colchicum should be watched. Even after these means, the pain may be obstinate and severe, requiring blistering. It may be necessary to continue the calomel until the gums are sore, as it is important to prevent the disease from becoming chronic, which it is very prone to do.

This chronic inflammation of the nerve is obstinate, and sometimes followed by loss of power, wasting and shrinking of the limb. The pain does not wholly subside, but is aggravated in paroxysms, and particularly at night. In some cases there is nocturnal fever. To distinguish this state from one of pure neuralgia, is often difficult. Nocturnal fever, and scanty, high coloured urine with sediment, sometimes assist the diagnosis. If the patient has this chronic form of the disease, when first seen, purgatives should be given, especially if his age is advanced. Calomel and colocynth, followed by castor oil, sometimes bring away hardened feces, and occasionally perseverance in the purgatives has relieved the disease, which seemed to depend on a loaded state of the bowels; but in general mercury will be necessary. The following formula Dr. Hunt employs—

℞ Hydrargyri phosphatis, gr. j. Opii, gr, j. Antim. potassæ tart, gr. ½. Fiat pilula omni nocte sumenda.

If there is much nocturnal fever, in addition to this, moderate doses of nitrate of potash and colchicum should be given three times a day, with occasional aperients. If much exhaustion of strength and emaciation, the compound decoction of sarsaparilla with the liquid extract during the day, and the mercurial pill at night. Counter-irritation is especially useful. Open blisters, the tartar-emetic plaster, or even a caustic issue behind the trochanter. Dr. Hunt alludes to the hydriodate of potash as producing a powerful effect in some cases, but says he has not himself used it.

Sciatica, of which pain is the only symptom, returning in paroxysms like electric shocks, is occasionally met with, and should be treated like pure neuralgia, first by purgatives, and then by steel, quinine or arsenic with sedatives.

A case is given in which sciatica existed with piles and prolapsus ani, and the removal of the piles relieved the pain.

Persons subject to sciatica should wear flannel drawers next to the skin, and if they are very susceptible to weather, washed-leather drawers over the flannel, during the winter months. We have seen benefit in some cases of obstinate pains in the sciatic nerve from washed-leather drawers worn next to the skin.

Sedatives.—There are three modes of giving sedatives to allay violent pain.

1st. By a very large dose at once. This is hazardous.

2d. By a smaller one, gradually increased. This is uncertain.

3d. By giving the largest ordinary dose, and repeating it every hour, or every second hour. This is the plan Dr. Hunt adopts. He is most partial to belladonna, and the largest quantity he has given has not exceeded one grain for three successive hours. Before the third dose is given the patient should be visited. When a decided check has thus been given to the pain, smaller doses, Dr. Hunt finds, keep both the pain and morbid irritability under control,—a third, a half, a grain once, twice, or three times every day, gradually diminishing the dose as the case improves. The patient should be instructed to take a dose at any time when the pain threatens to return. As a general rule, sedatives should not be given on the first visit, as by obscuring the symptoms, they render the detection of the cause more difficult. When there is uterine irritation, they are beneficial during menstruation, and when menorrhagia also exists, if given a few days before the commencement of menstruation, they often both moderate the discharge and allay irritation and pain. In these cases a mild aperient, such as castor oil, compound decoction of aloes, with or without gray powder, or blue pill, should precede the sedative. In cases where there is pain in the spine arising simply from weakness and irritability, sedatives are useful with quinine and steel; but when complicated with visceral obstructions, or of long standing, and when it has become a fixed disease, little relief can be expected.

Tonics.—Arsenic is clearly Dr. Hunt's favorite remedy, and he devotes a chapter to the rules which guide him in its administration. He finds it act most favorably on those of lax fibre, languid circulation, cold and moist skin, and whose urine is pale and plentiful. In such it not only relieves the pain, but gives general strength. Where the urine is high coloured and scanty, with lithate of ammonia sediment, the tongue loaded, and especially its tip and edges red, it disagrees and aggravates the pain; but it often is useful when the visceral disorders on which these symptoms depend are removed.

It is peculiarly appropriate when the disease arises from malaria and is strictly intermittent, when it depends on a neuralgic habit, disorder of the uterus; but when tic is associated with morbid action in the spine, or with anemia, or is complicated with visceral congestion, it is usually injurious.

Arsenic should not be given for many months successively, but should be discontinued from time to time, as soon as any of its peculiar effects on the system are discovered, and not resumed until all symptoms of its action have subsided. These are, less plentiful secretion of urine, more acid and high coloured, with at last deposition of lithate of ammonia, disinclination to food, rather hot skin, sensation of general warmth, with a tingling in the fingers and toes; but all these symptoms seldom occur together. The change in the

urine alone is a sufficient indication that the arsenic should be discontinued. Arsenic has been given in the solid form.

British and Foreign Med. Rev., July, 1844, *p.* 56-68.

4.—*Tic Douloureux Treated by Veratria.*—Dr. Le Calvé cites two severe cases of this painful disorder, which were entirely cured by frictions with veratria ointment. The first is that of a person employed as inspector of a telegraph, who, having exposed himself for half an hour to a very cold air, was a few minutes after seized with violent pains. They proceeded from the frontal branch of the ophthalmic nerve and radiated over the temple; the eye was injected, and there was considerable spasm of the eyelid, and dread of light. Dr. Le Calvé immediately prescribed the veratria ointment. After the first friction, at the end of a few seconds, the pains ceased with exceeding rapidity. The patient thought himself cured, and was soon asleep. At two in the afternoon a fresh attack came on, which yielded to a friction continued for four minutes. In the evening a preventive friction was made, and the patient passed an excellent night. The next day, about six in the morning, the pains re-appeared; but this time they proceeded from the superior maxillary nerve, at the point where it issues from the infra-orbital foramen, and thence they spread rapidly to the posterior and superior dental branches. A friction which lasted five minutes caused this attack to disappear. It was followed by a few others which always yielded to the same means. From this period, for more than a year, the neuralgia has not re-appeared The other case was that of a merchant's clerk, about forty-one years of age, of sanguine temperament, who was seized six days after a journey, during which he had exposed himself all night at the coach window, with a violent pain proceeding from the frontal branch of the ophthalmic, and radiating over the temple and the whole of the right side of the back part of the head. Dr. Le Calvé found his patient in violent agitation, and uttering piercing shrieks. The right conjunctiva was much injected, the eye was suffused with burning tears, and the dread of light was extreme. There was also a lancinating pain at the bottom of the orbit. The veratria ointment was immediately applied, and the pain yielded to a friction which lasted sixty-two seconds. At two in the morning a fresh paroxysm occurred, which yielded like the former to a friction of two minutes. Fifteen months have elapsed without any return of the neuralgia. In the preparation of the ointment, Dr. Le Calvé gives the preference to rancid lard, as it favours the formation by its acidity, of acetate of veratria.

Med. Times, June 15, 1844, *p.* 225.

5.—*The local pathology of neuralgia.*—This has been explained by Dr. Black upon anatomical principles. He very justly observes, that the nerves, which are usually the seat of neuralgic pains, are those which

take their exit from the interior of the body through canals in bone or unyielding tendinous structure. He adds to this, the anatomical fact, that each nervous twig is accompanied by a branch of an artery and a vein. It may easily, therefore, be conceived that those nerves, which are contained in rigid canals, must be subjected to injurious pressure whenever their accompanying vessels are unusually distended with blood. Upon this pressure, according to Dr. Wallis, depends the neuralgic paroxysm. The explanation is ingenious, and is borne out by the consideration both of the exciting causes and the effects of treatment.

Dr. Ranking's Address, Prov. Med. Journal, July 3, 1844, *p.* 200

6.—*Inoculation of salts of morphia for neuralgia.*—Dr. Jaques, of Antwerp, being called in to a young girl, who had a very obstinate supra-orbital neuralgia, having in vain employed antispasmodics, the sulphate of quinine, and salts of morphia by the endermic method, he conceived the happy idea of introducing some sulphate of morphia by inoculation under the skin. For this purpose, having dissolved two or three centigrammes of the sulphate of morphia in a small quantity of water on a bit of glass, he took up this solution by means of a vaccinating lancet, and made about forty punctures over the seat of pain: a marked relief ensued. The operation was repeated for some days, and the patient, who had been for a long time ill, was completely cured. The same plan has been applied in the treatment of sciatica; the inoculations have been made the whole length of the sciatic nerve, and the patients, on whom all other kinds of treatment had produced no effect, have been completely cured. Each puncture is immediately followed by a white elevation of the skin, which disappears on the next day. Poultices are useful to subdue the irritation arising from the punctures. This is a certain and speedy mode of administering energetic medicines; and it is probable that it may usefully be had recourse to in many other circumstances.—*Bouchardat, Annuaire de Therapeutique for* 1844, *in London and Edinburgh Monthly Journal.*

Dr. Castiglioni, an Italian physician, has employed the acetate of morphia in a similar manner. He uses a solution of three grains of the salt in half an ounce of distilled water, and inoculates this solution with a lancet, making numerous punctures in the course of the affected nerve.—*Gazzetta Medica di Milano.*

Prov. Med. Journal, July 3, 1844, *p.* 208.

7.—*Belladonna in neuralgia.*—At the Bath and Bristol branch meeting of the Provincial Medical Association, Mr. Norman related the particulars of a case of tic douloureux, recently treated by him at the United Hospital. The patient, a female, aged 59, leuco-phlegmatic, much emaciated, had suffered from it fourteen years, with few intermissions. Severe paroxysms, distorting the features, recurred every five or seven minutes, day and night, during the last four months, confining her to bed, and by which her health was much impaired. Belladonna was administered internally in doses of one sixth of a

grain every six hours, during two days, apparently without any particular effect on the disease, but acting as a purgative, which croton oil, administered freely, as advised by Sir Charles Bell, had failed to do. It was then combined with quinine. (Extract of belladonna one quarter of a grain, disulphate of quinine half a grain, every four hours.) After the sixth dose she became delirious in the night; the pupil partially dilated, but the paroxysms were reduced to sixteen, and on the following day to three; since which she gradually omitted the medicine, was able to leave her bed, to take full diet, having previously subsisted on fluids; and, having wholly omitted her medicine for one week, and having had no return of her distressing malady during ten days, she was dismissed the hospital.

Mr. Mortimer stated that in a case of tic douloureux well known to him, two grains of extract of belladonna had been given at once by mistake. The patient was alarmingly ill for a week, but never suffered from the disease again, though twenty years have since elapsed.

Prov. Med. Journal, July 17th, 1844, *p.* 239.

8.—TREATMENT OF HYSTERIA, NEURALGIA, PARAPLEGIA, ASTHMA, &c.

By Dr. Debreyne, Professor of Medicine in the Establishment of Grand Trappe (Orne.)

Hysteria.—The following formula is very highly lauded by Dr. D. in the treatment of this too common disorder.

℞ P. Camphoræ ℥ss.; P. Assafœtidæ ℥ss.; Extr. Belladonnæ ℈iv.; Extr. aquos. Opii ℈j.

Mix and divide into 120 pills; commence with two at first *per diem*, and gradually increase the dose to six in the 24 hours; they should always be taken before food. Occasionally a wine glassful of the infusion of Valerian or Orange leaves may be given with much advantage along with each dose of the pills.

Dr. D. is in the habit of administering them also for the cure of general or partial nervous trembling, and of *chorea*. Sometimes he exhibits, in the latter disease, the Belladonna by itself; and, he says, very generally with success. When it fails, he has recourse to cold bathing. No allusion is made to the use of steel in the treatment of this complaint by Dr. D.; an omission that seems the more strange, as he is so partial to ferruginous medicines in the treatment of many diseases of debility. According to our opinion, *the* remedy for chorea is the carbonate or sesqui-oxyde of Iron, especially when administered in any bitter infusion.

Neuralgia.—For the last fifteen years, we have been in the habit of using with the greatest success, in all forms of neuralgia,—scia-

tica excepted—the belladonna as an external application. Our formula is this :—

℞. Extr. Belladonnæ ℥ss. ; Opii pulveriz. ℈ij. ; Adipis suis ℥ss. ; Olei thymi mvj. M.

A portion of this ointment, as big as a hazel-nut, is to be well rubbed upon the affected part two or three times a day, or whenever the Paroxysms of pain are severe. The rubbing should be continued for eight or ten minutes at a time, until the ointment is quite absorbed by the skin ; a little saliva may be added every now and then to promote the absorption. Let it be remembered that the use of this ointment should be at once suspended, if the sight becomes very sensibly affected, or any unpleasant cephalic symptoms supervene. In very obstinate cases, Dr. D. conjoins the internal administration of the extract of belladonna or opium with the use of the above pommade ; but in the majority of instances, this is unnecessary, as the pain will very generally yield to the outward application. We employ it, he says, specially against facial neuralgias and other local painful affections of a nervous character, the megrim, &c. In one very severe case of neuralgia, which had lasted for nearly twenty years, and which had resisted our author's quasi-specific pommade, as well as a score or two of other approved remedies, the pain, which was seated in the skin, over the lower left ribs, at length yielded to the application of the Vienna caustic paste, so as to produce a pretty large eschar upon the affected part. With respect to the treatment of sciatica—which, as we have seen, Dr. D. separates, in a therapeutic point of view, from the other forms of neuralgia—his usual plan is first of all to order the application of several *volant* blisters along the course of the affected nerve ; and, if these do not quickly succeed in relieving the pain, to have recourse to his terebinthinate mixture, which is only a modification of that recommended first by Professor Recamier, and subsequently by Dr. Martinet. The formula is this :—

℞. Aquæ lactucæ ℥viij. ; Olei volat. terebinth. ℥j. ; Gummi Arabic ℥v. ; Syrupi simpl. ℥iiss. M.

The dose, a large table spoonful, in a glassful of rice-water, three times a day upon an empty stomach. Dr. Debreyne recommends at the same time the external application of an embrocation—composed of spirits of turpentine, ammonia, camphorated spirits of wine, and melted lard,—with which the affected parts are to be vigorously rubbed night and morning. In still more intractable cases, he has recourse to the use of moxas, applied over the seat of the chief pain ; the best point generally for their application is immediately behind the great trochanter. In conclusion, he frankly admits that the use of his favourite belladonna ointment is seldom efficacious for the relief of sciatica.

Paraplegia and Local Palsy.—Before we were acquainted, says Dr. Debreyne, with the special action of nux vomica on the spinal

marrow, we were in the habit of trusting almost entirely to the use of moxas, applied over the lumbar or sacral vertebræ, for the cure of paraplegia. But, for the last twenty years, we have invariably commenced our treatment of this disease with the alcoholic extract of the nux vomica, exhibited in the form of pills, each containing one grain of the extract. He begins with one, and gradually increases the dose until six—two at three different times—be taken in the course of the twenty-four hours. Whenever the patient experiences cramps and spasmodic twitches or tetaniform rigidity in the limbs, the action of the medicine must be narrowly watched; and it will be prudent either to diminish the dose, or even to suspend its use altogether, if these symptoms become excessive. The object should be to keep up the nervous excitement in a moderate and safe degree for a considerable space of time. If, after a month or two's use of the vomica, no decided benefit is obtained, Dr. D. advises the application of one or more moxas over the lumbar region.

He very properly cautions his readers not to expect the same benefit from the use of the nux vomica in the hemiplegic, as in the paraplegic, forms of palsy. It may, indeed, prove serviceable in some cases of the latter, where there is every reason to suppose that the sanguineous coagulum within the cerebral substance has been nearly or altogether absorbed; but in no case of this description should we be sanguine of doing much good.

For the cure of *amaurosis*, our author relies chiefly on the repeated application of small blisters in the neighbourhood of the affected eye, first on the temple and then over the eyebrow. In obstinate cases, the blistered surface should be sprinkled with a powder composed of starch and strychnine—about a fifth of a grain may be used at first, to be gradually increased. When this treatment fails, a seton should be tried. Dr. D. has used with very decided success a collyrium, containing some extract of belladonna, in a good many cases of day blindness or *nyctalopia*.

He also mentions a simple remedy for nervous *deafness*, which may deserve notice. Let the patient fill his mouth with the smoke of tobacco, or of any other dry aromatic plant—sage, for example—and then make a forced expiration, while the mouth and nostrils are closed: this should be done for several times in the course of the day. The smoke enters the eustachian tube, and thus produces a slight stimulant effect upon the internal ear. The remedy can do no harm; and this is saying a good deal in its favour, considering the nature of many of the means of acoustic medication. It is best suited to those cases where the deafness has supervened on some catarrhal complaint, and whenever we have reason to believe that the pharyngeal end of the eustachian tube has become thickened or obstructed.

Asthma.—For the last twenty-five years we have seldom prescribed any other formula but the following:—

℞. P. Inulæ Elecamp ℥ss.; Flor. Sulphuris ℥ss.; P. rad. Belladonnæ ℈iv.; P. rad. Scillæ ℈j.; Kermes min. ℈j. M. To be divided into ninety powders, of which one is to be taken three times a day.

Dr. D. assures us that he has witnessed excellent effects from this remedy, not only in asthma, but also in a variety of chronic pectoral affections, when they are unaccompanied with fever or inflammatory irritation; as, for example, in what has been called catarrhal phthisis, and so forth. To allay the cough in such complaints, he combines the use of the Iceland moss jelly with the anti-asthmatic powders. When these fail—which, according to his report, is not often the case—he advises a trial of the stramonium inhalation, and also of a strong infusion of the *camphrée* of Montpelier (camphorasma monspeliaca)—with the medicinal virtues of which he was first made acquainted by a writer in the Revue Medicale for March, 1821. During the paroxysms of asthmatic dyspnœa, he recommends a mixture containing the extract of belladonna, oxymel of squills, kermes mineral and orange-flower water.

In *Hooping-cough* also he again mainly trusts to the internal use of the belladonna, in the form of its powdered root. This remedy was employed with very marked success by Wetzler during a severe epidemic of this disease that prevailed at Augsburg in 1810; and it was about seven years afterwards that our author first gave an extensive trial to it. The dose of the powder must, as a matter of course, depend upon the age of the child, its constitution, the character of the existing symptoms, and so forth; but, if we state that a third of a grain should be given to a child twelve months old, twice or thrice a day, it will not be difficult to apportion the doses to other ages. When the fits of coughing are usually followed by vomiting, the powder should be given very soon after this has ceased. We need scarcely say that, if symptoms of inflammatory irritation be present, these must be subdued by the appropriate remedies, before recourse is had to the use of the belladonna powder.

Vomiting.—In the vomiting that may be considered to be nervous or spasmodic in its nature—*i. e.* when it is not connected either with inflammation or any bilious disturbance of the stomach—he recommends very highly the use of Colomba powder: it possesses, he says, a sort of specific virtue in such cases nearly as great as bark does in agues. He gives it in doses of from 15 to 20 grains in two or three spoonsful of red (French) wine, before meals. The addition of a few grains of magnesia, or of a minute dose of opium, may be necessary, if much acidity or gastralgia be present; and, should the patient be feeble and anæmic, the subcarbonate of iron may be very advantageously combined with it. Opium is freely used by Dr. D. in various abdominal affections, after the state of the intestinal secretions has been ascertained to be tolerably healthy. The following quotation will shew how highly he rates its value.

"We treat all internal pains whatsoever, and more especially those of the abdomen, with some preparation of opium—provided

always they are not connected either with acute fever, or with inflammation, or gout. We may, indeed, make a still more general assertion, and say that it is to the use of opium—which is *the* antidote of pain—that we mainly trust for the relief of all painful chronic diseases. If, along with the element of pain, there should happen to be co-existing a rheumatic principle—whether this shew itself externally or in some internal organ—we associate the use of rubefacients and other appropriate medicines along with that of opium. Without this most valuable drug, there could be no possible medication for a multitude of chronic diseases. If we were deprived of it, we should ourselves instantly abandon the practice of the healing art. Sydenham thanked God for His gift of opium to mankind for the cure of so many of the ills to which we are liable; and we can safely affirm, as far as relates to our own practice, that never a day passes over that we have not occasion to exhibit opium in some form or another. How admirably it acts, almost as a specific, in most cases of dysentery, not to enumerate a host of other maladies."

In various chronic hepatic affections and visceral obstructions, the following formula has been found by Dr. D. to answer exceedingly well.

℞. Pul. Aloes ℥ij.; Sapon Hispanic.; Pulv. Rhei.; Ferri Subcarbonat. āā ℥iv.; Potassii Ioduretti ℥ij.; in pil. 120 divide. Dose—From two to six pills in the course of the day.

If these pills do not prove to be sufficiently purgative, the patient should be instructed to drink some aperient mineral water to aid their action.

The favourite medicine of Dr. D. in dropsy is a medicated wine composed of

Rad. Jalapæ contus. ℥iiss.; Rad Scillæ contus. ℥iiss.; Pot. Nitratis ℥v.; Vini Albi ℔j. Dose—From one to three tablespoonfuls thrice daily.

The number of alvine evacuations need not exceed six or eight in the twenty-four hours. The remedy acts in some cases chiefly on the bowels, in others chiefly on the kidneys, while in a third set of cases both emunctories are powerfully affected at the same time. When patients object to the use of this wine, or when it appears to disagree with the stomach, we may have recourse to the use of the following pills:—

℞. Pulv. Digitalis ℥jv.; Pulv. Scammoniæ ℥ij.; Pulv. Scillæ ℥ij.; Extract. Juniperi q. s. Ut fiat massa in pil. cxx. dividenda.

Dose: from one to two pills three times a day, washing them down with three or four spoonsful of white wine, in a bottle of which half an ounce of nitrate of potash has been dissolved.

Dr. D. says that he has found these pills especially serviceable in cases of hydrothorax and hydropericardium. He is too experienced

and candid a practitioner not to admit that we can seldom, or never, hope to effect a *permanent* cure in such cases; still it is an important thing to relieve our patients for a time, and prolong, if it be not given us to save, life.

In cases of organic diseases of the heart, our author mainly relies on the internal administration of the nitrate in combination with tincture of digitalis—given in much larger doses than are usually recommended—and on the application of leeches or blisters over the *cardiac region*. He seldom varies his plan of treatment, and assures us that, with these simple means, followed out for a due length of time, he has succeeded in relieving a great many patients, who had derived no benefit from a variety of other remedies.

Med. Chir. Rev., Oct., 1844, *p.* 384—396.

9.—PARAPLEGIA TREATED WITH STRYCHNINE.

By J. C. Badeley, M.D., Chelmsford.

Miss Rixon, aged 13, had been attacked between five and six months before I visited her with pneumonia, attended by its usual symptoms, and for which she had been subjected to the ordinary treatment. About a month after the attack she lost the power of moving her lower limbs, and her voice was reduced to a whisper: her appetite then began to fail, and the action of the bowels became so torpid as to require the use of frequent purgatives. General emaciation followed; the limbs wasted and became cold, and so entirely void of all sensation as to be insensible to any stimulus which was applied. She was unable to bend either knee, but especially the left, without assistance; and the paralysis was so complete as to render her perfectly unable to use or even to move the legs. She complained also of pain in the head, and want of sleep. To remove these symptoms she had been put into hot baths, the limbs well rubbed, a blister had been placed down the spine, and she had been put on a course of tonic combined with purgative medicine, by the medical practitioner who attended her. But even these judicious measures had failed to produce any material benefit, and her friends had given up all hope of her ever recovering the use of her feet.

[Another blister was applied to the nape of the neck, and kept open by the unguent sabinæ: calomel gr. one-third, colocynth 2 grains, and one-sixth of a grain of the extract of nux vomica, were given every sixth hour. The latter medicine was gradually increased to one-third of a grain, and taken every night; but still no decided improvement took place, till one-twelfth, gradually increased to one-eighth of a grain of strychnine was given twice a day, combined with a little calomel and colocynth. In about three weeks the patient began to have more warmth in her feet, and said that she felt "a pricking and jumping sensation in them, and down the spine and lower extremities." The strychnine was then increased to one-sixth, with the compound aloetic

pill, gr. iij. three times a day; and in four days the patient recovered the use of her feet, and actually walked down stairs.

In this case there was evidently no organic disease; it was probably "a case of paralysis, which arose from diminished nervous excitement," and therefore well adapted to test the powers of the strychnine.]

Med. Gazette, July 12, 1844, *p.* 496.

10.—*Belladonna in Tetanus.*—[Dr. Hutchinson, Physician to the General Hospital, Nottingham, has published two interesting cases, shewing the effects of Belladonna in this fatal disease; from which it appears] "that in tetanus larger doses of belladonna are endured and required for its relief than in cases of neuralgia. The enormous dose of five grains of the extract of belladonna was successfully administered in the first case; and in the second the dose was gradually increased, until eventually four grains were given, and repeated every two hours. In this case, after a certain quantity of the medicine had been administered for a certain time, the system appeared to acquire a tolerance of it, and from this point of improvement the symptoms remained stationary until an increased quantity was administered, when speedily a manifest advancement again took place, and this continued for a certain period, until a larger dose was again demanded, in order still further to influence the disorder. This course was very well marked and positive, and this it was which encouraged and induced Dr. H. still further to increase the dose of belladonna, until eventually the tetanus was entirely subdued. It was remarkable that the spasms at first yielded to a moderate dose, but afterwards remained unimproving, until increasing doses of the medicine were required to advance beyond the point of amendment already obtained; this, to all observing the case, was very clear and certain, and served to prove the beneficial influence that the belladonna exerted over it. Indeed, the good effects of this medicine were very palpable; nothing else was administered save purgatives occasionally, which the obstinate state of the bowels required to be of a drastic character.

The success of these cases induces Dr. H. to urge a trial of the belladonna in large doses, in a very analogous affection to tetanus, viz., hydrophobia. In this appalling disorder death is materially hastened by the suffocation produced from spasms affecting the muscles of the glottis and larynx, so that the effects of medicine have not sufficient time allowed to act generally upon the system or to influence the complaint. It has most wisely been suggested to obviate this by making an artificial opening into the trachea. After this operation Dr. H. entertains greater hopes that the spasms accompanying hydrophobia could be at least more sensibly relieved by the belladonna, given in large doses, than by any other remedy. Tetanus and hydrophobia, although arising from different causes, in their ultimate symptoms much resemble each other, and in both

disorders the true spinal system of nerves appears to be the part upon which their violence is most displayed, so that it might be expected that whatever means relieved the one would not be entirely unavailing in the other.

Lancet, May 25, 1844, *p.* 277.

11.—ON THE TREATMENT OF STAMMERING.

By M. Jourdant.

M. Jourdant is of opinion that the cause of stammering consists in the precipitate emission or escape of the inspired air and of the speech at one and the same time; the stammerer expends in *blowing*, and not in *sound*, the air which he has received into his chest. Let us for a moment consider the series of phenomena, which take place in the natural and healthy condition of the organs. Whenever we wish to produce any vocal sound, we first of all make a deep inspiration and dilate the chest; then, at the moment when the act of expiration commences, the air during its escape through the *rima glottidis* produces the sound desired, and this is continued until all the inspired air has been expended. When this is the case, the person either ceases to speak, or, if he wishes to continue to do so, he makes a new inspiration, and the same succession of phenomena is reproduced and repeated. From the moment when the act of expiration begins, the chest returns to its normal condition slowly and gradually, in proportion as the sound is emitted; and the inspired air is so managed, that it escapes the more slowly as the sound is more intense and prolonged.

In the case of the stammerer, however, no sooner has the air been inspired into the chest, than its parietes begin to contract too soon, in order to expel any excess received. The sudden contraction expels a greater quantity of air than is necessary for the production of speech, and then this large volume of air, coming into the mouth at the moment when the tongue, the lips, and the cheeks are contracting for the purpose of articulating the sound, opposes the regular action of these organs: in this manner the confusion of the speech is induced.

The primary cause, therefore, of stammering consists, if this view of the case be correct, in a disturbance of the actions rather of the thoracic muscles, than of those which serve for articulating the vocal sounds; the latter lesion being only secondary and consecutive.

By the hurried and precipitate expulsion of the air in too large quantity from the chest, the sonorous waves, which serve for the formation of the voice, and which are about to be modified by the peculiar configuration that the buccal cavity must assume for each letter, are deranged and become confused. The muscles of articulation do not contract with readiness and ease, but are 'genés' in their movements; hence the great difficulty of pronouncing certain syllables, the more or less frequent repetition of certain others, and so forth.

From this theory of the production of stammering springs a very obvious indication for the treatment of it; viz., to prevent the expulsion of the air 'en pure perte' from the chest during the act of speaking. The chief difficulty experienced by the stammerer consists in detaining the air in the chest, and in allowing it to escape only very slowly and gradually. To effect this object, it is especially necessary to attend to the following rules in speaking: first of all, to make a gentle inspiration, as in the healthy case; then to make a very slight pause; then to begin to talk, taking especial care to keep *the chest continually somewhat dilated, and the abdomen slightly protruded*, giving out, all the while, as little air from the chest as possible; and lastly, before recommencing the same series of movements, to expel the air that remains behind by a *powerful expiration*. The most important point for the stammerer to attend to, is to keep his abdomen slightly saillant—a position which, by causing the descension of the diaphragm, forces the chest to remain expanded. M. Becquerel always observed the necessity of attending to this injunction in his own case.

M. Jourdant generally advises his patients to mark with their thumb the three several acts which he wishes them to attend to—viz.: 1, the inspiration and the rest; 2, the articulation, while the diaphragm has descended, and the chest is dilated; and 3, the expulsion of the air that remains behind in the lungs, by a strong and forcible expiration. The greater the quantity of air that remains in the chest for the final expiration, the better. If these simple rules be strictly attended to, it will be found that no stammering can take place, even if the person tries to do so. It requires indeed assiduous efforts on the part of the stammerer, and these too continued for several days, before he can hope to overcome the difficulties in question. Once however that he succeeds in fully understanding and reducing to practice the mechanism of the treatment, he can pursue the plan now recommended at his leisure with increasing facility and effect; for the respiration gradually becomes less and less embarassed, and the muscles, both of the chest and the vocal organs, become more obedient to the dictates of the will. As a matter of course, we cannot anticipate much benefit from this, or indeed from any other method of cure, till the individual is old enough to have due command over his feelings and resolutions.—*Traité de Begayement, &c., par Dr. Becquerel.*

Med. Chir. Rev., July, 1844, *p.* 204.

12.—*Delirium tremens treated by ammonia.*—In one of the recent German Journals, we find a paper by a Dr. Scharn on the subject of this troublesome and distressing malady. The learned doctor having experienced no little disappointment from the use of the remedies in general use, and conceiving that, as the disease is nothing else but intoxication arrived at the period of its *apogee*, it should be treated by the very same means which are known to be most service-

able against the latter, he had recourse to the employment of ammonia, in the form of the pyro-oleaginous solution, or of the succinate of the alkali. By means of this very simple and innocuous remedy he has succeeded, he assures us, in curing a great number of very severe cases of the disease.

It deserves notice that M. Brachet, also of Lyons—a gentleman whose opinions are justly entitled to consideration—has recently recommended the same remedy, ammonia, in the treatment of delirium tremens.

(Ammonia by itself will rarely suffice to subdue the excitement and allay the restlessness of this neurosis: opium must almost always be associated with it. We have often used, with good effect, the ammoniated tincture of valerian, and the liquor opii sedativus—not forgetting the application, at the same time, of warmth to the feet, and of cooling spirituous lotions to the head. When symptoms of febrile or inflammatory irritation are present, it may be necessary to resort to leeching, and the administration of effervescing saline draughts with antimonial wine.)

Med. Chir. Rev., July, 1844, *p.* 219.

13.—*Mustard in Infantile Convulsions.*—Dr. Tripler treated a case of convulsions from teething with mustard, which he employed for its emetic effects—he had previously employed antimony, sulphate of zinc, sulphate of copper and the usual emetics, but without being able to make any impression on the stomach. In a few minutes after its employment it arrested a fearful attack of convulsions, which had lasted five hours, and that without vomiting the patient for some time afterward—he afterwards used it in several other cases and with equal success. Its efficacy seemed to have no relation to its emetic properties.

Med. Chi. Rev. July, 1844, *p.* 266.

14.—THE CHEMICAL PHENOMENA OF RESPIRATION.

By M. Gay-Lussac, (Abridged from the Med. Gazette for May 10, 1844.)

The physiological world is divided between two opinions on the subject of the chemistry of respiration. According to one, propounded by Black, and advocated by Lavoisier, the formation of carbonic acid and of water takes place in the lungs themselves, and in virtue of the mediate contact of the oxygen of the inspired air with the blood contained in the delicate blood-vessels. According to the other view, the oxygen of the air does not act immediately on the blood in the capillaries of the lungs; it is merely absorbed there: the chemical phenomena in which it is influential take place without the lungs in the course of the general circulation; and it is only on the return of the blood to perform its lesser circuit that it gives off the products of the oxidizing processes that have already taken place in its mass.

The latter theory is chiefly indebted to M. Magnus for its development, and for the grounds upon which it was accepted in the world of science. The grand object of Magnus was to prove—1, the presence of carbonic acid in the blood; 2, the different proportions of carbonic acid, and of atmospherical air or oxygen in the blood of the arteries and veins. M. Gay-Lussac questions the validity of M. Magnus' conclusions; some of his inferences being found even in opposition to those which his facts would warrant. According to Magnus' theory, venous should contain more carbonic acid than arterial blood. Yet by actual experiment this chemist obtained less from venous than arterial blood. This grand contradiction, however, is not the only one. Both kinds of blood contain oxygen and azote as well as carbonic acid If azote be formed in the course of the circulation, as experience has proved, the quantity of this gas ought to be less in arterial than in venous blood. Yet, according to the figures in Magnus' experiments, arterial blood contains half as much azote again as venous blood. The relative proportions of oxygen alone seem at first sight to agree with Magnus' theory, venous blood being found to contain about one-half less oxygen than arterial. Now it is obvious that the carbonic acid which makes its appearance during respiration, is formed at the expense of the oxygen absorbed by the blood; hence there must be a certain relation between the volumes of these two elastic fluids. If, for instance, we know the relative volume of the carbonic acid expired in a given interval, we know that the corresponding volume of oxygen absorbed must be at least equal to it. Unfortunately, the conclusions of M. Magnus regarding the quantities of carbonic acid and of oxygen discovered in arterial and in venous blood respectively, are mutually subversive of each other.

For want of positive data, which are not to be attained from the labours of Magnus, we shall take them from Davy. 1. Davy states that a man expires thirteen cubical inches of carbonic acid gas in one minute. 2. That the heart, at each pulse, expels one ounce of blood; and, taking the number of contractions at 75 per minute, 75 ounces, or 115.7 cubic inches of blood, will pass through it in the same interval of time. Now 115.7 cubic inches of blood having given off 13 cubic inches of carbonic acid, 100 of blood will contain 11.23 of this gas, a quantity which the blood might readily part with, as, according to M. Magnus' experiments, it contains much more than 20 per cent. of the gas. But, supposing that the venous blood gave off 11.23 per cent. of its volume of carbonic acid, it is evident that to produce this, arterial blood ought to contain at least an equal volume of oxygen, say 11.23. Moreover, as in the respiratory act, of four parts of oxygen absorbed, three go to form carbonic acid, and one to form water, the blood must have taken up, in its course through the lungs, not only 11.23 oxygen, but $11.23 + \frac{11.23}{3} = 14.97$, a quantity which is sixteen times greater than the 0.926 of oxygen

which pure water can dissolve in the same circumstances, that is to say, in contact with atmospherical air. And further, if we allow with Magnus that venous blood, on reaching the lungs, still contains about one-half of the oxygen originally dissolved in the arterial blood, the whole quantity which the latter ought to contain at its exit from the heart will be, first, 14.97 destined to be used up in forming carbonic acid and water, plus 7.48 remaining in the venous blood; in all 22.45, a quantity which would require us to suppose that, in contact with an atmosphere of oxygen, 100 of arterial blood could take up $22.45 \times \frac{100}{21} = 106.9$, or more than its own volume of the gas. Such a capacity in arterial blood for dissolving oxygen, though not impossible, would require proof.

Magnus explains the change of colour in venous blood entirely by the loss of carbonic acid in the lungs. But it is not proved that venous blood exhales carbonic acid in the lungs; and then, if it were, the quantity of carbonic acid which it does not give off, according to Magnus, is still so great in comparison with what it does eliminate, that it appears impossible to explain by a difference in quantity relatively so small, any change of colour so remarkable. It is therefore obvious, that the theory of respiration, advocated by Magnus, has as yet no sure foundation, and that the chemical phenomena of this vital act require to be discussed anew. M. Gay-Lussac, with M. Magendie's able assistance, proposes to go over the ground of the theory of respiration.

Med. Chi. Rev. July, 1844, *p.* 258.

15.—ON EUPATORIUM PERFOLIATUM IN INFLUENZA.

By J. F. Peebles, M.D.

This herb, it is known, derived its domestic name of boneset from its prompt manner of relieving pains in the limbs and general muscular system, which attended a peculiar form of febrile disease which prevailed many years ago in the northern parts of America. It was this fact, together with the knowledge of the remarkable combination of properties possessed by it, which led to the suggestion of its employment in epidemic influenza; and nothing could be more marked and satisfactory than the prompt manner in which it answered the expectations which had been formed of it in this respect. The pain in the back and limbs, and the lassitude of the general muscular system, subsided so soon as the system was placed under its influence; its immediate and salutary operation in this way, at once prominently exhibiting its great value in the treatment of the disease. But its curative agency was not confined to this effect alone, for blended with this prompt action on the nervous system—we can in no other way account for its speedy removal of the pains and the general muscular prostration except by referring its operation to the nervous

system—the eupatorium perfoliatum united, in its operation, other qualities, each one eminently adapted to fulfil some important indication in the treatment of the disease in question. Among the first of these we shall name its diaphoretic powers. The sudorific influence of this herb is of that peculiar character which eminently fitted it for employment under the circumstances. For, in this disease, the skin was not unfrequently imbued with perspiration. But, probably, from a peculiar condition of the cutaneous surface, the sweating was of a morbid character—a sort of passive excretion, resulting apparently from a lax condition of the skin, which was always under such circumstances pale, and morbidly sensitive. This state of the cutaneous surface, particularly its morbid sensitiveness, in no small number of cases, constituted a curious, and not a little distressing, attendant on the disease. Antimonials were found to increase the perspiratory discharge, without altering its character; and hence, at least as far as this symptom was concerned, they were unproductive of benefit. The pulv. Doveri answered this purpose better. The suppression of the secretions resulting from the opium entering into its composition, however, rendered this article objectionable, inasmuch as, to counteract this unfavourable result, it was required to be exhibited in such combination, as to render it unsuitable or unnecessary in a majority of cases. Entirely exempt from this objection, the eupatorium perfoliatum not only induced a healthy and free perspiratory discharge, but promptly altered the condition of the skin, restoring its natural hue, and rendering its texture firm and healthy; and the unpleasant alternation of chilliness with flushes of heat were replaced by an agreeable glow of the general surface. So soon as this healthy diaphoresis was induced, together with the relief already mentioned as occurring, the disposition to cough subsided, and there was an immediate amelioration of all the pulmonary symptoms. The subsidence of the cough, the removal of the dyspnœa, and that painful irritation of the pulmonary organs, which in many cases seemed to have extended to the remotest air vesicles of the lungs, were more directly due to the medicine, administered after the method adopted by us, becoming a prompt and efficacious *expectorant*. Indeed, we know of no article or combination to be preferred to it, as an expectorant in the disease under consideration. The ethereal tincture of lobelia, recommended by Dr. Blakiston, an English physician, is the only preparation of which we made a trial, which bears any approach to it in point of excellence in this respect; but this being the only important indication which this article is qualified to fulfil, it is greatly inferior to the boneset. Together with the properties already mentioned, this medicine has further proved itself sufficiently aperient for the treatment of most cases of epidemic influenza. After the commencement of the treatment, it was rarely found necessary to use any other cathartic, and not then, except in those cases in which the constipation of the bowels had been persistent, or where the head was unusually affected.

Its tonic property is the remaining one which we shall point out, as particularly adapting this medicine to the treatment of certain cases of epidemic influenza. It certainly is a great desideratum in the management of this disease in aged subjects, where there is such a tendency to prostration long before any impression is made on the violence of the attack, to have a remedy which, with due evacuant powers adequate to the removal of all the symptoms, unites a tonic influence sufficient to support the general strength, and to maintain at the same time the integrity of the circulatory functions. The admirable association of its tonic with its other properties, creates in the eupatorium perfoliatum such an agent, and endows it with an advantage over all articles or combinations, in the management of the disease under these circumstances. Indeed, where the disease was treated from the first with this medicine,—the cold infusion alternated with the warm according to the circumstances of the case, and the amount of prostration present,—no case occurred where more decided stimulants or tonics were required; and we are convinced that the former preparation of this herb is the very best article of this class, not only to prevent, but to overcome when existing, the prostration so frequently supervening upon this disease in old persons. Nor were its salutary powers in this way confined alone to the aged. It has never, we believe, been noticed before, and hence, whether it is universally the case or not we have no means of judging; but it is certain that the coloured population with us suffered in a peculiar manner from this disease. In almost every case, from its very commencement, it assumed a marked and curiously asthenic character, yet upon the whole it was not more formidable, nor more difficult of management than the same disorder in the white subjects.

In these cases it seemed to expend its force upon the nervous system, producing a despondency of mind, a depression of the vascular and a prostration of the muscular systems, wholly disproportioned to all the other symptoms. It was no unusual occurrence, after a negro man had staggered into the office as though he were intoxicated, and stated his case with a gloomy presentiment of evil, to find upon examination a prostration of the pulse really startling, while the pulmonary symptoms were trifling, and the bowels were free of the morbid contamination; in fact, the pain in the back and limbs, the remarkable and extreme lassitude of the muscular system, and the uneasiness about the head, being the only symptoms for which he sought relief. It was surprising how soon a few doses of the infusion of boneset, administered solely with a view to secure its tonic and aperient effects, would remove this state of things. There is yet another class of cases, to which this property of the herb, from its peculiar association, renders it particularly applicable. The disease occurring in the habitually inebriate, induces a train of morbid effects in the highest degree embarrassing, and for the treatment of which we found nothing so salutary as its cold infusion, combined with the tincture or infusion of hops, according as the nature of the case required sedation.

Manner of administration.—In the severest cases, where it was

determined to treat the disease with the herb alone, the patient after being covered in bed, was induced to swallow a wine-glass full of the infusion, prepared by infusing an ounce of the dried leaves in a pint of boiling water, warm every half hour. After the fourth or fifth dose, considerable nausea, sometimes vomiting, with free diaphoresis ensued, and there was an immediate amelioration of all the symptoms. Along with the nausea free expectoration commenced; and after the former symptom had subsided, the patient was freed from every annoyance, and remained in every respect comfortable. Sufficient to keep up the impression on the system, the infusion was now given only every third or fourth hour in the same dose. The bowels were generally opened in about six hours after the commencement of the treatment, and afterwards continued in a lax condition. Towards the evening of the second day, and particularly if the patient had been guilty of imprudent exposure, the symptoms frequently returned, and it was necessary to repeat the course adopted at first. But generally the medicine, continued as directed, kept the symptoms completely in check, and the patient was out on the fourth day. In cases where the treatment was commenced with calomel, &c., the infusion, to secure its diaphoretic and expectorant effects, was introduced on the second day in wine-glassful doses every second hour. To correct the debilitating effects of the disease, frequently remaining after all its acute and more violent symptoms had subsided, a wine-glass full of the cold infusion was directed three times a day.

The treatment of the disease in old persons, or in other cases where there was a marked tendency to prostration, was commenced in the same manner. As soon as the effects already mentioned as occurring were induced, the cold substituted for the warm infusion was directed in the same dose every second hour, to be continued, gradually lessening the period throughout the disease, unless the violent symptoms returned, when it was to be discontinued until the same course was repeated with the warm infusion, and then resumed.

From the foregoing exposition of the properties and mode of action of the eupatorium perfoliatum, we feel convinced that it will be awarded, that its introduction is an acquisition of some value to the therapeutical means of managing the curious disease under consideration.

Not the least of our reasons for believing so, is, that whilst it allows the patient treated by it to pass out of the disease as speedily and as perfectly as any other remedy or course of treatment, it leaves him with less impairment of his general health, and causes fewer interruptions to the natural healthy functions of the body. In short, the universality of the disease when it prevails, finds an exact counterpart in the cheapness, as well as the simplicity, of the remedy.

American J. of M. S., April, 1844, *p.* 364.

16.—*On the Nature of Tubercle.*—By Dr. C. H. Schultz, Professor in Ordinary at the University of Berlin. Products of disease which

appear at first in the shape of diaphanous granules, after a time become opaque, often contain chalky deposits, and get indurated. They may be either encysted or disseminated; they occur generally in the young, and have their seat most frequently in the lungs, (phthisis) but they are also met with in the brain, glands, and bones. They pass through various stages in their development; at first they are semitransparent, then become dull and opaque, at last friable, and of a caseous consistence, and resolve themselves into pus. On chemical analysis they yield a caseous kind of matter, some altered fat, with phosphate, and carbonate of lime. A poor and crude state of the blood, both as regards its formation and depuration, are disposing causes to the formation of tubercle, a condition most frequently met with in scrofulous subjects.

Gluge, Vogel, and others, have lately endeavoured to prove a peculiar cellular structure in the substance of tubercles, but this does not in reality essentially belong to them: it only occurs in the latter stages, when the tubercle is resolved into pus, and the appearance truly arises from the formation of pus globules. No cells are discovered by the microscope so long as the tubercles remain in the shape of diaphanous granules, but merely a uniform mass, into which, at a later period of the caseous alteration of the tubercle, granular flocculi are deposited; and which under the microscope do not exhibit any regular globular form, (regelmässige kugelform.) In those cases where a few stray globules are perceived by means of the microscope in the semi-transparent tubercle, these are nothing else than fat finely disseminated through the tubercular mass. The true nature of tubercle does not depend upon its having any determined organization, but in a peculiar deposition of matter, consisting of an abnormal formation of albumen and fatty deposition. Its true nature consists not in its organized form, but in its amorphous character. The fat and albumen appear to be a product of abnormal chyle taken into the blood, whose fundamental elements, albumen and fat, are not capable of being transformed into healthy blood vesicles, and healthy blood plasma, and which are therefore separated from the blood as foreign elements, and again deposited in other organs, in the shape of an abnormal lymph. In the formation of tubercle, it is the organizing process that is in fault, as the assimilated matter cannot advance in the course of regular formation. Tubercle accordingly has no tendency to organization. Were it capable of assuming the organic form, it would have done so in the healthy blood, and would have been converted into fibrine and blood vesicles. But as the blood plasma, in tuberculous dispositions, remains stationary as in albumen, and does not advance towards organization and the formation of fibrine, it is thrown out as tuberculous matter. The low vitality in tuberculous matter very much assimilates it to a caseous coagulation, or to a precipitation of globules, which by farther metamorphosis is transformed into a kind of purulent mass, in which are seen globules, larger and smaller, and which have been regarded as regular cells. We should also notice

here, that tubercles, in a greater or lesser degree, become covered with a pellicle which, at a later period, as in fistulæ and abscesses, constitutes a kind of adventitious membrane round them, the throwing off of which (mauser) gives occasion to the formation of epithelium cells, but which do not as such belong to the tubercles. Tubercles, therefore, possess no true organic nature. The hypothesis of the parasitic nature of the growth of tubercles has much contributed to the misunderstanding which has prevailed regarding their structure. Tubercles, however, are certainly not of this character. A correct view of the nature of this diseased formation will bring their treatment into harmony with their pathology.

London and Ed. M. J. of M. S., June, 1844, *p.* 505.

17.—*Antagonism of Pulmonary Phthisis and of Intermittent Fever.*—At the scientific congress at Lucca this subject was warmly discussed, without any satisfactory result having been arrived at. Dr. Salvagnoli presented a series of cases, accompanied by a statistical table, tending to show that in the Maremmi district of Tuscany, where intermittent fevers are very numerous, pulmonary phthisis and scrofula are but rarely met with. This pathological fact he endeavours to explain in the following manner :—If we admit (says he) a physiological antagonism between the liver and the lungs, which most physiologists do, it is easy to understand why phthisis should be rare where intermittent fever is common. Malaria acts principally on the abdominal viscera, increasing their action and volume. This increase of abdominal vitality diminishes the vital activity of the lungs, and thus prevents the development of tubercles in their tissue.

Dr. Griffa confirmed the observations of Dr. Salvagnoli respecting the rarity of phthisis in the Maremmi. Dr. Rino, on the contrary, maintained, from observations made at the Clinique of Pisa, that phthisis was common in marshy countries. These views were also supported by Dr. Turchetti, who asserted that in the marshy districts of Fucecchio and Bientina he had not remarked the antagonism, which was described by Dr. Salvagnoli as existing in the Maremmi. Dr. Trompeo stated that he had had great opportunities for observation in many localities in Piedmont, where malaria was kept up by the rice-grounds, and in Sardinia, where intermittents are extremely frequent and severe; and that in both these countries he had found phthisis very rare wherever intermittent fever was common.

Lancet, June 1, 1844, *p.* 310.

18.—*On Hematology.*—The analysis of the blood of various animals, affected with different forms of inflammatory disease, has invariably exhibited an increase in the normal proportion of its fibrine. In the cachexia aquosa—known usually by the name of the rot—in sheep, the blood is found to be very seriously altered. The proportion of the fibrine is increased, while that of the globules, and also of the albumen in the serum, is very notably diminished

below the standard of health. The watery portion or serosity of the latter constituent is much greater than in health ; in some cases it amounts to as much as 930 parts in 1000 of the blood. The cachexia aquosa in sheep and the disease of albuminuria in the human subject are the two pathological conditions, in which the proportion of the albumen in the serum is found to be most remarkably diminished. It is curious however that there is none of this element discoverable in the urine of the animal, when affected with the former malady. But thousands of parasitic entozoa are usually found dispersed through the substance of the liver and lungs. Moreover, the existence of this malady, even in a high degree, does not exclude the occasional development of well-marked inflammatory action. Under such circumstances, the proportion of the red globules in the blood continues to be very low ; but that of the fibrine becomes very sensibly augmented, in spite of the general feebleness of the system, and the extreme impoverishment of the blood. It would seem therefore that the increase in the proportion of the fibrine is always associated with the development of acute diseases in constitutions that are much enfeebled, although the proportion of the red globules is much lowered beyond the normal standard at the time. It is important to attend to these circumstances, as they serve to point out the general character and tendencies of the humoral doctrine of the present day.

The characteristic feature of the old humoral doctrine is the unqualified assertion, as the basis of all pathological reasoning, of the vitality not of the blood only, but of all the other fluids of the body. It assumed, as a principle not to be controverted, that they (the fluids) were animated with the same sort of living activity as the solids, and therefore that they, like them, were impressionable from a variety of agencies, both in health and in disease. According to this view of the subject, the fluids, in virtue of this vital activity, participated in the regular movements of the functions, and might become primarily the subject of their perturbations, as well as the direct agent of the sanative efforts of the system to restore the equilibrium of health. Little engaged with the physical properties of the animal fluids, the physicians of those days paid not much attention to anything but to their general and external aspect, and almost quite neglected to examine their intimate or elemental composition. Now modern humorism entirely reverses this mode of procedure. It does not profess to notice or take any account of the inherent activity of the animal fluids ; but it confines itself to the task of examining with the most scrupulous minuteness all their physical and chemical properties. We observe the same sort of difference in point of doctrine between the old and modern schools, that has often been remarked in reference to the medical tendencies of the two epochs in question. In the former, the great aim of the physician was to watch the general phenomena of the system, and the more conspicuous manifestations of diffused vitality ; while, in the latter, he directs his attention almost exclusively to the profound study of individual facts and

special phenomena, and scarcely notices the more general characters of disease. The ancient doctrine was based, as we have already said, exclusively on considerations of the vital activity of the fluids; whereas, the modern one is entirely occupied with studying the material structure of the humours, their forms, and their organic constitution. Without distinctly recognising the independent and proper vitality of the fluids, it is however always to be borne in mind that, as long as they remain within the living body, they possess specific properties or qualities, which cease to exist almost immediately when withdrawn from the agency of the solids, with which they are normally in contact.

If the fluids of the body possess functions distinct from their physical and chemical properties, we are nevertheless not to deny that there is a bond of union between the functions in question and these properties. Every one knows that the latter are continually undergoing, from a variety of circumstances, numerous modifications which have almost invariably a more or less distinct relation with the conditions of health and disease. For example, the fluids do not exhibit the same characters in respect either of colour, or of density, or of the proportion of their constituent parts in individuals of different ages, temperaments, sex and so forth; and even the same individual, without becoming positively out of health, is liable to experience vicissitudes of this nature, corresponding with the incessant fluctuations of regimen and the general mode of life. The state of disease very prominently displays the intimate relations that exist between the general characters of the fluids and their peculiar characters as living matter. Who does not well know the density and deep colour of the blood in inflammatory diseases, so very different from what is observed in cachectic and dropsical maladies?—who has not seen its general melting down, so to speak, or sort of aqueous solution, which frequently accompanies the presence of organic lesions, like cancer, scrofula, &c.? and surely no one can require to be reminded of the humoral changes that occur in scurvy, mercurial intoxication, or purulent infection. It cannot therefore be reasonably denied that there is a most close and necessary correspondence between the normal or pathological impressions of the fluids, and the modification of their composition, or their physical changes. Now it is precisely in this point of view that the humoral doctrine of the ancients was most difficult and at fault; it had unravelled with surprising sagacity the physiological and pathological conditions of the fluids, in relation with their impressions and affections; but it failed to detect the circumstances of those impressions or affections which may be reflected in the aspect and structure of the humoral matter. The deficiency in this respect was doubtless owing to the imperfect state of the accessory branches of medical investigation, more especially in the departments of physical and chemical science.—*Gazette Medicale.*

Med. Chir. Rev. July, 1844, *p.* 177.

19.—ON SOME OF THE DISEASES OF THE HEART.

By C. J. B. Williams, M.D., F.R.S., Professor of Medicine in University College Hospital, &c.

Sounds of the Heart.—The sounds or murmurs accompanying the systolic action, as also the impulse, must be modified greatly by the force of the current out of the ventricles. There are several circumstances to be taken into consideration in reference to this subject; for instance, the blood may flow, in the usual direction, into the aorta, the murmur being caused by some irregularity in the orifice; or the sound may depend on regurgitation through the aortic, the mitral, or the tricuspid valves. It may also be produced by perforations of the heart, and communications with the sac of the pericardium, or openings existing between the two ventricles, &c. Again, the murmurs which are heard during the diastole of the heart, are produced by a flowing back of the blood into the ventricle; and they are chiefly regurgitant aortic, regurgitant mitral, or else obstructive sounds.

Now, with regard to the distinction of the situation of the sounds, we find them chiefly produced or propagated in those parts of the chest which form the best conducting media; as also in those parts corresponding to the direction in which the current flows. The obstructive aortic sound is heard best when the heart and the aorta are brought near to the surface of the chest, as is sometimes the case in consequence of enlargement of the heart. It may be heard most plainly about the middle of the sternum, or its lower part, though sometimes more on one side, sometimes more on the other. There is no certain rule with regard to position. You find obstructive aortic disease sometimes occupying one position, and sometimes another. But it is not the mere position of the sound that distinguishes the disease. It is heard where it is produced; but it is also propagated in the direction of the great arteries, and extends along the aorta, behind the sternum, up the course of the *innominata*, the left *subclavian*, and along the *carotids*. On the other hand, it may be heard pretty distinctly downwards towards the apex, but is by no means so loud nor so long as over the course of the arteries. Then, again, the obstructive pulmonary sound is heard much in the same position; it is a very small murmur, and may be produced by constriction of these arteries. The pulmonary artery and the aorta lie so close to each other, that there is some danger of confounding these sounds. There is this difference, however, between them. When you find the murmur very loud, and when it extends along the carotids, you may generally suspect it to be seated in the aorta. The obstructive aortic, and the regurgitant mitral, are the most common murmurs accompanying the sounds of the heart. The regurgitant mitral is produced in the mitral valve. It is heard, not so much immediately over the seat of the valve, (about half way between the mammilla and the margin of the sternum) as it is at the apex of the heart, or a little below the left breast.

Functional Maladies.—I now pass on to the consideration of the diseases of the heart; first noticing the functional diseases, which imply disorder of the proper function of the heart's action. Disordered action of the heart may be divided into *increased* action, *defective* action, and *irregular* action. Inordinate action of the heart is engendered by various causes, and may be produced by different pathological states. For example: undue irritation of the heart, by an over-stimulating property of the blood, as when a person has taken stimulating liquors in considerable quantity. It may also arise from other causes than the state of the blood itself: from something extraneous to the heart,—some mechanical cause interfering with the heart's action, as the stomach being over-loaded,—or from reflex irritation through the medium of the nerves, caused by various irritating matters in the stomach; also it is produced by increased irritability of the muscular fibres of the heart itself, which may depend either on a greater flow of blood through the structure of the heart, or on determination or inflammation of the lining membrane of this organ. Palpitation of the heart may be defined to be that amount of inordinate action which is perceptible to the patient himself, and is productive of more or less distress. The distress produced by the violent action of the heart is sometimes very great; the patient is conscious of the beating, which is accompanied by a hurried and violent motion, as well as by a feeling of suffocation. There may, however, be inordinate action to a considerable amount, without the patient being aware of the existence of the disturbance; many such persons being merely subject to short breath and a feeling of faintness. It is a remarkable fact, that with regard to functional diseases, generally speaking, the patient is conscious of the palpitation; but in cases of structural disease, where there is inordinate action, the patient is not invariably conscious of the existence of palpitation. The reason of this is, that in cases of functional disease, the affection is intermittent, varying in its degree at different periods; and it is during this increase in degree that the palpitation becomes distressing and uncomfortable. In these cases there is an exalted sensibility, a nervous excitability, existing in a high degree,—an undue sensibility of the nerves that renders the patient conscious of these inordinate motions of the heart. On the other hand, in structural disease, the inordinate action is developed gradually, until at last the patient becomes accustomed to it.

Physical Signs Accompanying Palpitation.—The physical signs of mere palpitation, without any structural disease, are an increase of the impulse, as well as of the natural sounds of the heart, exactly like that produced after violent exertion; violent exercise, in fact, produces palpitation, but it subsides with the cessation of the cause. With this augmented force of pulsation, the heart may be felt vigorously beating against the chest, and there is increased loudness of the first sound, in consequence of the greater vigour and abruptness with which the muscular tension is produced; but there is

not augmented loudness in the second sound: there is not enough blood forced into the arteries, at each beat, to cause a sudden increased recoil upon the valves. In addition to the greater strength of impulse, and abruptness, there is an absence of the signs of enlargement of the heart, which, although beating violently, is still in its proper place. The signs on percussion are not materially modified. If there be any trifling amount of disease at the root of the aorta, or in the aortic valves, so that there is a regurgitation of blood into the ventricle, these sounds become exaggerated during palpitation. In violent palpitation, the phenomena are strongly marked at the top of the sternum, in the carotids and arteries which are near, and in some cases of this kind the jugular veins may be seen to pulsate. Attacks of palpitation often terminate with eructation of wind, and when the palpitation subsides, there is a free flow of urine. In some cases, palpitation is excited by temporary plethora. Large quantities of fluid being drunk, become absorbed into the vascular system, and cause palpitation and a great flow of urine, which is thus an index of the system having got rid of this excess. Sometimes perspiration takes place, and the thing subsides in this way. There are various causes of congestion which may produce palpitation; the heart is sometimes active, but does not contract fully on its contents, and then it is excited to violent palpitation. This occurs not unfrequently in connexion with asthenic plethora; and in this case there is increased dulness of sound at the region of the heart, and this organ is actually distended by the quantity of blood which it is unable to get rid of. This, likewise, often co-exists with defective action of the excretory organs, a condition which thus induces great plethora of the vascular system. Palpitation is sometimes produced by other causes which bring about internal congestion: such as long exposure to cold; insufficient clothing; or even the opposite extreme, great heat. It is very commonly produced by extraneous causes; such as pressure over the region of the heart; flatulence; accumulation of fæces in the intestines; improper food; the formation of tumours near the heart or great arteries; and disordered uterine function. In all these different cases, the palpitation is only sympathetic; it may be only temporary: but if it continue, it becomes very distressing, and tends in some instances to produce further disease, by throwing the blood irregularly into different parts of the system. Long-continued palpitation, accompanied by plethora, may cause permanent disease of the heart or of the great arteries (either *hypertrophy* or *dilatation*). This is owing to the activity of the plastic process. In cases in which it is accompanied by congestion or inflammation, it tends, by its continuance, to the production of organic disease; on the other hand, as I have said, it is produced in the opposite state from merely nervous causes; by an anemic state, or a deficiency of blood in the whole system; and this may go on for a long time without producing any structural disease, merely accompanied by considerable functional disturbance.

Treatment of Palpitation of the Heart.—The treatment of inordinate action of the heart must depend on the cause. It may sometimes be relieved by stimuli, which seem to restore the natural action of the heart, and remove the nervous palpitation. Ether, aromatic waters, ammonia, and spirits, will give great relief in some cases of palpitation, restore the balance of the heart's action, and check the nervous irritability. These are only temporary measures. In cases in which it depends on congestion, the removal of the cause of this congestion must be considered as of essential importance. In all cases in which plethora exists, it is useful to employ local depletion to relieve the heart, and take away the increased load. Bleeding from the arm is, under some circumstances, serviceable; and it is desirable to produce increased action in the excretory organs, by purgatives, and various diuretics. It is, of course, necessary in cases of palpitation, accompanied by plethora or fulness, that the patient should be abstinent; and doses of calomel, for awhile, and Dover's powder, are of great efficacy; but they must be used in a moderate degree. The best means of acting on the urinary secretion, is by colchicum, digitalis, and nitre. If the disease occur simply from nervous sensibility, without the plethoric state I have been mentioning, sedatives should be used in combination with other medicines; hyrocyanic acid, hyoscyamus, opium, and quinine, are the remedies. Sedatives, however, are but temporary measures; and for permanent good, tonics are chiefly to be depended upon. The most useful is iron, where it can be borne; bismuth, nitrate of silver, and sulphate of copper, are also good remedies. In all cases, country air is essential; an abstinence from sedentary habits; regular exercise; and the use of cold water, either by drinking it, or sponging the whole surface, which tends to improve the capillary circulation; also a cold plunge bath;—these are the means which are most efficacious.

Irregular and defective action may be classed together. Irregular action is defective in its actual result. Irregularity in the rhythm of the heart, is very common in weak and nervous subjects, both young and old. It consists in an interruption of the beat, or a retardation, or else in too great an acceleration; so that instead of recurring at regular intervals, one sometimes occurs sooner than the other; then there is an interruption, and then it goes on again. A constrained posture will sometimes produce this condition; as also irregularities of diet, and so forth; this state, moreover, is usually combined with other symptoms of weak circulation, such as coldness of the extremities, or a congestive appearance of the face. Irregularity and inequality of the heart's pulsations are more commonly the effect of structural disease; but the palpitations I have been mentioning, as accompanying asthenic plethora, are often attended by irregular action, although there may be no organic disease.

Medical Times, April 27, 1844, *p.* 64.

Hypertrophy and Dilatation.—It is desirable, first of all, to notice hypertrophy, dilatation, and diseases of the muscular structure, because these require to be carefully distinguished in the treatment. Now, the muscular structure of the heart is scarcely liable to inflammation in itself, and *carditis* in the surrounding coats is extremely rare. The muscular structure of the heart is nevertheless liable to remarkable changes, and these appear to have relation more to the immediate derangement of its functions than to inflammation. There are many cases of structural disease in organs, in which direct inflammation is produced; but it is not so with regard to the heart. We find the origin of structural disease of the heart to be more particularly depending on disorder of its function; and it may be stated, as a general fact, that circumstances which interfere with the function of the heart, which over-excite it or tax it in various ways, tend to produce diseases in its structure. Now, inordinate action and defective action may both lead to structural disease of the heart. On the other hand, we sometimes meet with cases in which the structural affections will go on for an almost unlimited period, without leading to great functional derangement. These are principally cases of anæmia, in which the quantity of blood is insufficient. Again, there are cases in which an over-quantity of blood may have an influence in producing disease; where there is a plethora or fulness of the vessels. In some, this is accompanied by a peculiar activity in all the functions connected with the circulation, secretion, and nutrition; this is comprehended under the term *sthenic* plethora. In the other kind, there is an absence of power in the blood to nourish and increase the muscular substance of the heart, arising from some deficiency in the quality of the blood, or from some other cause; and this comes under the head of *asthenic* plethora. Now, in relation to these two cases, we may observe the development of two opposite conditions of the muscular structure of the heart. *Sthenic* plethora, inducing an excitement of the heart, will lead to hypertrophy of this organ, and an increase of the muscular structure. On the other hand, the increased or irregular action—which you will frequently find connected with *asthenic* plethora—a state in which there is a distension of the heart, without a corresponding increase in its nutrition, leads to a lesion called dilatation of the heart. These are the two modes in which these lesions are produced, and they comprehend the various exciting causes. The matter however may be stated in another point of view; and this leads us to an explanation as to the modes in which various exciting causes act; as, when the heart is excited by continued obstruction—when there is some difficulty to the passage of the blood through the heart, either from weakness in the walls of the heart, or from positive obstruction in the vessels leading from it. Either of these causes excites the action of the heart, and leads either to dilatation or hypertrophy, according to the preponderance of the elements hitherto considered.

Now we come to *hypertrophy*. This is a somewhat rare disease. But, when the heart struggles long against an obstacle to the circula-

tion, at the same time that the nutritive function is active, and the muscular strength is kept up, hypertrophy does take place. The exciting causes of hypertrophy are several:—excessive muscular exertion, more particularly during the continuance of growth, when the nutritive function is active, and there is sthenic plethora in the system; that condition in which the blood is rich in nutritive matter, and ready to deposit its fibrine; when the heart is strong, and great excitement is given to it, it then grows in an inordinate degree. It is not, however, enough that the muscular exertion is occasional, it must be habitual. Again, in structural diseases, which are accompanied by so much obstruction as to impede the circulation, and excite the action of the heart in an inordinate degree, as the various obstructions that arise in the course of the large arteries, such as aneurism, &c., or any cause interfering with the current of the circulation, as emphysema of the lungs, and all those various circumstances which overtax the heart; in all these cases the muscular fibres of the heart are enlarged and hypertrophied. Obesity, too, when it is accompanied by sanguineous plethora, has a similar effect; and you find many cases of obesity attended with hypertrophy. This always manifests disorder of the circulation. Whenever a person is inclined to be corpulent, there is naturally more work for the heart, according to the necessary order of things; an increased task for the heart requires increased power and exertion. But in a state of cachexia, this increase in the substance of the heart does not take place; and we find symptoms of weakness of the heart, tending to palpitation, and other things under the head of defective action; and though the heart is not diminished in size, yet it has become too weak for the work it has to perform. These are the only two elements required for the production of hypertrophy, which it is necessary to bear in mind: namely, sanguineous plethora, and excessive and continuous excitement of the heart. Any circumstances contributing to these two things, usually lead to a greater or less amount of hypertrophy.

The physical signs of hypertrophy are very distinctive. There is an increased development of the muscular fibre, and this renders the contraction stronger, and consequently the impulse is more perceptible; but it is slow and more heaving. The fibres do not contract with the same abruptness and suddenness, as in the normal state, and the sound is more or less modified. Where there is simply hypertrophy, unaccompanied by dilatation, the sound is usually diminished; whereas, in cases of dilated hypertrophy—where dilatation and hypertrophy are combined—there will be an increased loudness of sound, together with an increased strength of impulse. But the chief characteristic, distinctive of hypertrophy without dilatation, is an increase of impulse with a diminution of the sound, just as in dilatation there is an increase of sound with a diminution of impulse. In some cases, the first sound is very indistinct at the region of the heart, and the impulse is strong and heaving; but near the large arteries, the first sound is heard more

plainly. Where the increase of the substance of the heart is considerable, and the dilatation great, we then have a remarkable kind of motion produced during the diastole. In the normal state of the heart, the diastolic motion is scarcely perceptible; all that is felt is the apex of the heart coming in contact with the ribs, with the motion of the ventricle to the left of the sternum. But, in these cases, during the diastole, we have a kind of heaving up of the walls of the chest, and that to a great degree; but there is a sudden collapse or pulling back of the walls at the moment of the contraction. This diastole Dr. Stokes called the back stroke, and it is frequently met with in cases of dilated hypertrophy. Now, besides this, the impulse is stronger and more extended; but the degree of this extent will vary according to the form of the hypertrophy. If it be simple hypertrophy, without any great enlargement of the cavities of the heart, the beat will be found but little lower than usual, and the impulse will seem to be directed downwards, without extending beyond its usual locality. But, in hypertrophy, with enlargement of the left ventricle, the impulse will vary according to the degree. The apex will be felt beating to a greater or less extent below the left breast. On the other hand, this dilated hypertrophy may sometimes assume the globular form, and then the impulse is felt mostly higher up, and has not that striking or lifting character usually accompanying it. This is a curious phenomenon of this species of hypertrophy. Ordinarily, the whole heart is lifted up, as it were, during the diastolic action, and at the time of the contraction, the apex is forced towards the walls of the chest. This is the reason why there is a sort of heaving swell felt in the region of the heart, when it is considerably hypertrophied. This is chiefly felt in the neighbourhood of the sternum, and sometimes as low down as the epigastrium. Now, when the heart is very much enlarged, and the impulse is felt over a very great extent of surface, we shall find the sound on percussion considerably modified. The stethoscope is an invaluable instrument in these cases, and may be applied with great certainty to measure the dimensions of the heart in contact with the walls of the chest. And in cases of greatly enlarged heart, where there is not only hypertrophy, but dilatation of the walls of the heart, you will find that this viscus occupies a great part of the front of the chest, from the upper margin of the second rib, extending to the epigastrium; also, around the left side, and the axilla, and passing two or three inches to the right of the sternum. This is particularly the case in young subjects where the chest is narrow.

The *effects of hypertrophy* vary very much. You may find the enlargement of the heart accompanied by a more extended impulse than usual, but with little increased dulness on percussion, in some individuals scarcely amounting to disease; whilst in others it may occur to the extreme degree I have just been describing. Indeed, I believe that, in some cases, hypertrophy may be considered almost as a corrective of disease, and sometimes little inconvenience is felt

from an enlarged heart. You find enlargement of the heart accompanying other diseases—diseases of the lungs and visceral affections, and in the greater number of instances of this kind, the progress of the disease is rather retarded than otherwise. There is a constitutional state in which there is a diminution of energy in some functions, at the same time that others are more active. Where enlargement of the heart accompanies emphysema of the lung, you do not have the dulness over the region of the heart, nor the impulse usually manifested, in consequence of the lung standing between the walls of the heart and the chest; but you have the signs of enlargement at the epigastrium, and you have also increased pulsation in the arteries. I have had cases of emphysema of the lung under my care, in which nature has overcome the obstacles in which the enlargement of the heart had originated.

Treatment of hypertrophy of the heart.—You must remember that hypertrophy, although it may exist to a great extent, is not always a disease against which remedies can be directed. In fact, hypertrophy is to be considered as a condition which may terminate in disease. When, by the application of auscultation, we find the heart larger than usual, this indicates the necessity for precautionary treatment, but not for inferring the actual existence of disease. Accordingly, the treatment will vary very much. In extreme cases, where there is increased strength in the heart, and the circulation is very strong, there will be sometimes determination of blood to the head; and arising out of this there will be disorder of the secretory organs, and of the system generally, which may thus act secondarily on the heart itself, the violence of its action producing pain, and other sensations of discomfort. Now, we cannot expect to remove such a state as this altogether by bleeding. In severe cases, where there is an extraordinary amount of congestion and pressure in the system, there is no doubt of the expediency of blood-letting. In cases, where there are symptoms of congestion of the brain from determination of blood to this organ, blood-letting may be resorted to in proportion to the strength of the patient. You must not, however, take too much blood at one time, but rather take a small quantity, and repeat the operation if necessary. Use evacuants, and such medicines as will reduce the quantity of blood, without much impairing its quality. Also, sedatives of various kinds; such as *digitalis, hydrocyanic acid, &c.*, to diminish the irritability of the heart's action, which is not to be knocked down at once, but to be reduced in a gradual manner. Where there is much pain and oppression, with a feeling of uneasiness at the chest, there is reason to suspect something of an inflammatory character, either accompanying the hypertrophy, or produced by the increased efforts of the enlarged heart. In this case, not only the depletory measures I have alluded to should be employed, but mercury should be administered, and cupping, blisters, and setons, may be used. The diet should be sparing, and irritating liquids should be avoided. The

object is not to carry the antiphlogistic measures to the highest degree, but to produce a more moderate and equal action.

Ibid, May 25, 1844, *p.* 144.

The physical signs of dilatation of the heart require care to be distinguished from those of hypertrophy. If the walls of the ventricles are thin, the contractions take place very abruptly and quickly. The result of this is, that the contraction ceases with the first impulse. There is a smart jerk with the first impulse, but it is a very short one, having nothing of the heaving character of hypertrophy. There are several points in which the impulse and the sound differ from the natural ones: the impulse is short and abrupt, possessing very little strength or duration. In the natural condition it is chiefly centred at the apex, and extends but a slight distance around; that of the right ventricle is inferior in strength to that of the left; but when there is considerable dilatation of the right ventricle, so as to make it extend to the anterior part of the chest, you then no longer have the beating effect, located between the cartilages of the fifth and sixth ribs. Under these circumstances, you have somewhat more of the impulse under the region of the sternum. It is very brief and slight in its force, and is accompanied by a short, abrupt sound. If the left ventricle is not dilated, the natural obtuse sound may still be heard below the left breast. But when the heart is not in direct contact with the chest, you cease to have the impulse, which is naturally communicated, because the dilated right ventricle pushes aside the left ventricle. Under these circumstances you do not have symptoms of weakness in the circulation. There is considerable strength in the impulse of the arteries in the neck, and at the top of the sternum, though there may not be the natural amount of impulse at the region of the apex. When the left ventricle is dilated, there is a change in the condition of the heart, and its shape is altered. The heart is altogether more globular, and there is a diminution in the natural impulse. It is far less distinct, and is diffused over a larger surface: where dilatation is conjoined with hypertrophy, the impulse often extends over ten or twelve square inches, over the whole of the front of the chest and the left side. The sound is otherwise different in its character. It is a short first sound, extremely like the character of the second sound; so that the two sounds following each other are not to be distinguished in character, but only by their succession. On placing the hand on the region of the heart, there is found to be an increase of the impulse, as far as extent is concerned; but it does not lift up the ribs at all. If it does that, we may be pretty sure that there is hypertrophy, combined most probably with extreme dilatation of the auricles. We have, however, no certain means of determining this at present, and we are not acquainted with any peculiar pathological conditions which it tends to produce. Laënnec thought that dilatation of the auricles produced modifications in the second sound; but he seems to have had a mistaken notion as to the sound produced by the contraction of the

auricles. I have very distinctly seen the pulsation of the auricles alternate with that of the ventricles. Sometimes a double pulsation is seen in the veins; this is especially observable in the jugular veins, and the superficial veins of the thorax.

The *treatment of dilatation* is very much the same as that under the head of defective action. It proceeds essentially from weakness; a want of tone and of strength, or, perhaps, of both; and accordingly the treatment most generally applicable to the dilated heart is strengthening by means of tonics. But there are different circumstances to be taken into account in the application of this form of treatment. Sometimes the blood is more than the heart can propel, and we have here to enable the heart to propel this load: it is some time before we can give sufficient strength, but we may give temporary relief. When the dilated heart is palpitating much, and obviously struggling with a load of blood which we cannot propel, we should apply blood-letting and cupping, or leeches over the region of the heart. Sometimes, in asthenic plethora, where there is much lividity, or a bloated appearance of the countenance, there is more blood in the system than the heart can propel, and it is useful to withdraw blood to relieve the heart. This is only a temporary expedient. There is another circumstance that indicates the necessity of a modification of a general tonic treatment: you must remember that there is a weak circulation throughout the whole system, and at the same time a weakened state of the secretions; and therefore it is important, while we are using tonics and stimulants, also to employ measures to increase the action of the secretory organs. This is an indication that should always be attended to. Evacuants, aperients, diuretics, and dietetics, may be used at the same time that you are giving tonics and stimulants freely. The treatment should be as strengthening and as nourishing as the patient can bear. Mineral tonics, especially iron, are highly calculated to restore the strength of the heart, and to diminish the irritability of the system. It is desirable to vary the use of these from time to time, at the same time giving mineral acids. It is difficult to say how these tonics act on the animal frame and the contractile powers, but it is certain that some tonics have the effect of tightening up the muscular fibres: alum also might be useful in these cases. I have seen this remedy so far useful as to diminish the congestion of the liver. Tonics, however, are slow of action, and in cases of weakness stimulants may be given, especially where any exertion is required—ammonia and so forth may be used. It is very desirable to keep down the mass of the blood, and to prevent it becoming too bulky, at the same time that we improve its quality, and make it as rich as possible. In doing this, we must attend to the state of the secretions, keeping them quite free, more particularly those of the kidneys and of the skin. Warmth of the extremities, and so forth, is useful to relieve the accumulation of blood towards the heart, and to promote circulation towards the surface; keeping the diet of as nourishing a character as possible. See that the digestive organs are well mana-

ged, and avoid excess of liquids, as these are often extremely injurious, not only by interfering with the digestion, but likewise by encumbering the organs of secretion. When a great quantity of water is taken into the system, it must be absorbed and carried away into the vessels. If the heart is weak, too great a quantity of liquid will encumber it still more. There are many reasons for adopting a diet of a dry nature, though not absolutely so. The diet should be as nourishing as it can be borne, and there should be abundance of animal food taken two or three times a day, if the digestive organs will bear it. A little gentle exercise is highly desirable, as much as can be taken without fatigue, varying the exercise with rest in a recumbent position. Where the patient is too weak to bear exercise, friction may be substituted, so as to promote the circulation, and thus aid the action of the heart. Great advantage is derived from cold bathing, which tends to improve the cutaneous circulation, and ultimately increases the vigour of the system.

Ibid, June 1, 1844, *p.* 166.

Now, we come to a subject of much more frequent occurrence, and more important in a practical point of view:—*Disease of the valves and orifices of the heart.* We have hitherto considered diseases of the muscular fibres and of the membranes covering them, and we have now to attend to the lesions of the mechanism by which the circulating current is directed and conducted from the heart. We now come more especially to the diseases of what may be termed the hydraulic apparatus of the heart, in contra-distinction to that of the muscular structure, or the dynamic apparatus of the heart.

Now, it is desirable to divide the diseases of the orifices and valves into two great classes. First, there are the *obstructive* lesions—where there is more or less obstruction to the current of the blood in its proper channel; and secondly, those that occasion the blood to take a reverse direction, or a backward course, and these may be called *regurgitant* diseases. Now, the lesions that produce these different affections, are very numerous, and I will describe the chief of them under different classes,

First of all, those which are allied to the affections we have already considered, as connected with *endo-carditis.* 1stly. Under this head may be mentioned a thickening of the *endo-cardium,* causing a similar condition in the valves. Sometimes this resembles a deposit of lymph, as in cases of recent endo-carditis,—a sort of fibrous matter on the surface. This may occur in various parts. It is found at the semilunar valve, giving rise to a thickening of the margin of the valves, and often taking a peculiar shape from the contact of one valve with another. It very commonly happens that there is a thickening of the membrane, deposited in the shape of a festoon, or what is called a scutiform thickening of the valve. The pressure of the valves against one another, modifies the appearance of the deposition; generally, the valves are thickened to a considerable extent, there being little vegetations round their margins: the orifice of the valve is also

sometimes a little fringed. In one case that I witnessed, there were as many as eighteen of these fibrinous tumours, connected with the cords of the tricuspid valve. Another effect of this deposition is adhesion of one valve to another: this is a very common lesion. It is very common to find two of the aortic valves adherent to each other; so that instead of having three valves, you have but one valve entire, and the other two adherent, the intermediate portion forming a sort of projection between them. The effect of this is to cause an obstruction to the passage of the blood. The same thing may occur in the mitral, and more rarely in the tendons of the tricuspid valve.

2ndly. There is another class of lesions included in some of the depositions I have already mentioned. Besides a deposition of fibrine on the endo-cardium, there is a thickening of the fibres and texture of the valve beneath this membrane, and the formation of a tense yellowish-white structure, so that the muscular portion becomes so altered, as to a great degree to present that peculiar appearance which constitutes hypertrophy of the texture. This appears to be a deep-seated lesion, connected with a change in the muscular structure, besides an affection of the endo-cardium. Well, then, this probably arises from the formation of a sub-serous coat or texture, most commonly in the *laminæ* of the valves, and the tendinous cords; and in connexion with this hypertrophy, there is very commonly a sort of elongation in the fibres; and I have often found that where these deposits have taken place, there is an impaired elasticity, and a disposition to contract at one time, and to elongate at another, and, on that elongation, to break; thus producing great irregularity in the apparatus of the valves, and interfering with their proper functions. Sometimes this may lead to rupture of the heart. Frequently, in addition to this, there are small osseous deposits in the thicker portions of this fibrinous matter; and sometimes the tendons are quite thickened in this way. There may be various degrees of this. There may be a mere thickening—not interfering with the action of the valves, which is comparatively rare. Then there is thickening with shortening of the valves, causing a partial closure of the orifice; and thickening with elongation, causing an irregular enlargement of the opening. For instance, suppose thickening with elongation to take place, it has the effect of rendering the affected side of the valve quite loose, so that it never becomes tightened, and it cannot act perfectly at each systole; the blood gets behind it, and is forced by regurgitation backwards into the different cavities. This will, eventually, produce various lesions of the heart itself.

3rdly. Another thing to be considered is that affection of the orifices, in which there is an osseous or cartilaginous rigidity, especially at the aortic orifice, causing thus an obstruction to the circulation. Deposition is extremely common at the root of the aortic valves, causing obstructive disease, without any actual projection of these processes. The most remarkable form of deposition of osseous matter is a cohesion of the valves, causing almost a complete closure of the orifice, or so reducing it as to make it only capable of admit-

ting a tube of the size of a crow-quill. The same thing occurs with regard to the left auriculo-ventricular opening. This adhesion of the *laminæ* of the valves reduces the orifice to one-fourth or one-fifth of its natural size, causing obstructive disease. This state is always combined with regurgitant disease. You scarcely ever have this without some regurgitation into the ventricle, or the auricle, through this narrow orifice.

4thly. There is another kind of thickening, attended with a sort of disposition to ulceration, or at least, to rupture. This usually affects the aortic valves, and is one of the most serious diseases to which the heart is liable; in which the valve is broken down, leaving only a rim, or a sort of cord across the orifice of the artery; the other valves are here very much diseased likewise: it is generally the result of a degree of acute inflammation, involving not only the membranes, but also the deeper-seated structure. Persons addicted to habits of intoxication are subject to this form of disease.

5thly. There is atrophy of the substance of the valves; this may take place simultaneously with thickening of their lower portions; and if it is extensive, it must produce serious results, leading to considerable regurgitation. Shortening and atrophy of the valves is not a very common disease. It may, however, vary very considerably in extent, the laminæ, in some cases, being much longer than in others. With valvular imperfection, there is generally hypertrophy, or dilatation of the heart, or both. I have already mentioned that this combination has been usually considered a great aggravation of the mischief; but I am quite sure, in many cases, it is so far from being an aggravation, that it is rather a compensation; and the effect of this, at least of hypertrophy, and, perhaps, partly of dilatation, is a sort of counteraction to the imperfections of the valves. When there is obstructive disease, the blood is not forced with freedom through the orifice, and increased force is required to propel it with sufficient power. On the other hand, when regurgitation takes place, the same thing may be said. When there is obstruction to the passage of the blood from the auricle to the ventricle, dilatation is the morbid consequence. If there were no receptacle for the blood to regurgitate into, it would press on the affected parts, and rupture would be the consequence. The same sort of thing is found to take place, naturally, in diving animals. There is no doubt that hypertrophy is a great cause of evil in many instances, and it does not compensate for the mischief occasioned by the increased violence of the circulation. Dilatation, too, may be said to have a bad result in many instances, because it is accompanied by weakness of action. All the lesions I have been considering affect the left side of the heart infinitely more than the right side, at least, generally speaking, and the reason for this has been variously ascribed. It has been attributed to the stimulating quality of the arterial blood. But there are several causes;—first of all, there is the more active function of the left side of the heart; this increased activity, therefore, predisposes to disease. 2ndly, there is the different structure of the left

side of the heart; the left side is altogether stronger and thicker than the right: but this very strength and thickness offer a greater facility to the increase of disorder, when it is once induced in the walls. 3rdly. We must consider the more extensive relations of the left ventricle. You cannot disturb any part of the body, without the left ventricle bearing a portion of the disorder. Violent exertion, sudden chill, or any check to the circulation, all bear more on the left ventricle than on the right; and the result of this frequent exertion or interruption imposed on the left ventricle; renders it more liable to disease than the other.

Ibid, *June* 8, 1844, *p.* 192.

On the Physical Signs of Valvular Diseases.—These are highly characteristic. I have stated, that what are called murmurs, or abnormal sounds produced in the region of the heart, are most generally caused by some modification of the current passing through the orifices of the heart; and it is by these sounds mainly that we distinguish the character of the lesion, and its seat. But we must observe, that it is not every modification of the orifices of the heart, that will produce a murmur; it is only those that fulfil or complete the elements of sound, and give a vibrating resistance to the current as it passes. Hence, you will understand, that where the obstacle in the orifice is very small, it does not interfere materially with the current of the blood, and it may give no vibratory resistance. With some pulsations, there is no murmur, but during strong pulsations, there will be a murmur produced. Sometimes, the aortic valves may be closely pressed together, so that the blood is forced out through a small orifice; in this case, the vibrating resistance may not be enough to produce a murmur. Again, the thin state of the blood in anæmia may produce a murmur, though rich blood may not. It may happen, if the valvular disease is considerable, that the murmur is not heard in the weak pulsations, but it will be heard when the heart beats more strongly. In the *tricuspid* orifice, there is frequent regurgitation, so as to produce pulsation, not only in the auricles, but in the great veins, as the jugular. This is not accompanied, in most instances, by any murmur; and the reason of this is, because the laminæ of the tricuspid valve are placed flat against the direction of the current, and being rather light and yielding, they do not afford enough resistance for perfect vibration.

The murmur is then, generally speaking, a *certain rule and indication* of some *valvular disease*. But the amount and degree of the murmur is far from being proportioned to the amount of the lesion. You may have a very loud murmur indeed produced by a very slight lesion; this is more particularly the case with those lesions that are called regurgitant. The loudest murmurs are what are called the musical murmurs, where the vibrations, produced by the current, are not only noisy, but so regular in utterance, as to constitute a prolonged musical tone, the vibrations being equi-distant. The quality of the murmur is the best guide to the amount of the lesion,

though even this is not a sure one. Those which are uniform, whether of the blowing, or the whistling character, generally announce slighter lesions than the murmurs that are grating, or more deep-toned. This is a general rule. The musical sounds, when of a simply blowing, or uniform character, are mostly caused by regurgitation through the smaller channels; on the other hand, the deep-toned murmurs mark the larger currents, and a harder kind of obstruction. Laënnec, Drs. Hope, Wilson, and others, have thought the rough murmurs indicative of a rigid state of the orifices. Now, the contrary is the case, for, where this state exists, there is a great amount of looseness in the sound; and one of the harshest murmurs I ever heard, was in a case where there was no ossification at all. The breaking down of one of the valves caused a vibrating obstacle in the direction of the current. The intensity of the sound is not at all in proportion to the loudness, but it depends rather on the capacity of the obstacle for vibrating. There are, as I have mentioned, some obstacles which do not vibrate at all.

Natural Sounds superseded by the Murmur.—There is another character about the murmur, and that is the degree in which it supplants or supersedes the natural sounds, whether the first or the second. Whenever you have a murmur so intense and loud, that you hear nothing at all of the first sound, you may be pretty sure that the lesion which produces it is very considerable, not merely as to the anatomical condition, but as to its effect on the constitution. On the other hand, when you have a murmur added to the natural sounds, there is a certain degree of proof that the natural actions are going on well; accordingly, when there is extreme disease of the mitral orifice, you find, towards the apex, that you can scarcely hear the first sound at all, but merely a prolonged blowing, not only obscuring by its loudness the first sound, but actually overpowering it. But if you apply the stethoscope over the right ventricle, you hear the sound. It modifies the suddenness and the character of the tension on which the first sound depends, and converts it into one which takes its character from the murmur itself. And it would appear in these cases, as if the vibrations naturally produced in the walls of the heart were converted into vibrations of the murmur—a conversion of one into the other. We find these sounds arrested under various circumstances. If we throw a string into vibration, and while it is vibrating, bring it near to another string also in vibration, and hitherto incapable of vibrating an octave, the octave sound will be very loud indeed; and you find that the second string, instead of responding a lower note, responds an octave;—one vibration therefore supersedes other vibrations previously existing; and it appears that the murmur, to a great extent, not only muffles, but entirely destroys the natural sound of the heart, and converts the simple obtuse sound that naturally arises, into a prolonged blowing. Again, with regard to the second sound, the same thing is particularly observed. There is a sufficient reason for this; for where the disease is considerable, you have not only the second sound superseded, but

the tension of the valves, on which the second sound depends, may be entirely destroyed. In the musical murmur I mentioned just now, the natural sound was not entirely superseded, showing that the amount of disease was limited. The patient did not die of disease of the heart, though there was a certain amount of hypertrophy of its walls : but he died of a fever.

Ibid. June 22, 1844, *p.* 232.

The two chief classes of valvular disease are the *obstructive* and the *regurgitant*. The signs of the obstructive aortic being connected with the first sound, and the regurgitant aortic with the second sound : but regurgitant mitral is, in some measure, connected with the first sound. The distinction between the obstructive aortic and the regurgitant aortic is obvious. The mode in which it is distinguished, is by the manner in which the sound is propagated to the walls of the chest ; the regurgitant mitral being transmitted most distinctly, and chiefly at the part corresponding with the apex and surface of the left ventricle ; it is not heard so much in the upper part of the chest ; whereas the sound of the obstructive aortic is above that, and is chiefly heard from the middle to the top of the sternum. Speaking of the symptoms produced by disease of the aortic valves connected with arterial excitement, there is almost always hypertrophy of the heart, and the arteries become the seat of an unusual impulse, a jerking kind of motion ; and the symptoms, if the hypertrophy is considerable, are rather those of arterial excitement than of venous obstruction. On the contrary, mitral regurgitation and mitral obstruction produce especially the signs of venous obstruction in various parts of the system ; in the vessels above the left auricle, and in the lungs, producing pulmonary congestion, pulmonary apoplexy, bronchial flux, sometimes hydrothorax, and bronchial congestion, with a liability to inflammation and congestion of all the other viscera, to a great degree. Thus the whole venous system is affected ; the right side of the heart is dilated, and regurgitation takes place, and the veins of the neck and brain become congested. The regurgitation produces, sometimes, lethargy and stupor ; and the other organs, more particularly the liver, are affected.

We find that a long continuance of this disease causes structural changes to take place in the different viscera ; the lungs are more hypertrophied than usual ; the liver, more especially, is enlarged, not merely under the influence of congestion, but a species of hypertrophy ; and sometimes there is a transition to a state of subsequent contraction and degeneration. The same thing takes place in the kidneys ; and thus diseases of other organs are superadded to the disease of the heart, and this superaddition of other diseases is really a common cause of the fatal termination of regurgitant disease. The different valvular lesions I have mentioned may be combined together ; in some subjects you will have murmurs in both situations, referable to the mitral valves and the aortic orifice.

The mode of distinction, here, is by the loudness and the distinctness of character of the murmur in both situations. Under these circumstances, you may have the aortic murmur heard in the middle of the sternum, and transmitted, as usual, to the arteries; but yet you hear also a loud distinct murmur at the apex, as loud as at the mid-sternum.

I have already mentioned that there are some cases of aortic murmur transmitted to the apex of the heart; but the character is usually different in this and in mitral disease. The sound of the latter is shorter than in the murmur which is produced at the aortic orifice. The aortic murmurs are never so superficial. The blowing or whistling sounds are likewise different in character in these two cases; there is a deep, grating, hoarse murmur in the aorta, whereas the murmur at the apex is loud, whiffing or blowing. This distinction is very useful in our prognosis, more particularly if these murmurs supersede the natural sounds. Then, you know, in conjunction with these, the other signs of the disease may be different; and the great reason why these signs of heart affections are sometimes so complicated, that we cannot determine the position of the murmur at any one particular spot, is, as I before stated, because the enlargement of the different parts of the heart causes great displacements and alterations of position; and the only constant relation which is preserved, is with regard to the direction of the current into the arteries, or its direction backwards through the auricles.

The general treatment of a diseased heart, in the first place, is to be directed according as excessive or defective action predominates. There are cases in which excessive action, connected with hypertrophy, is predominant, and the action of the heart and neighbouring arteries very strong. Moderate sedative and depletory measures should be here adopted. The same thing is to be said in case of inflammation: the treatment must be more or less antiphlogistic, although we have not the same means of knocking down the inflammation altogether, as we cannot with impunity reduce the system to too great an extreme in these cases. Another class is that in which the action is altogether defective, as shown by faintness, weakness in the circulation, and irregularity of the heart's action. This is generally benefited by stimulating means; but remember, there are some instances of defective action, where the heart has already got such a load that it cannot propel it, and we shall here give more relief by taking away some of the blood. This is the congestive form of the affection; and in congestive affections, as well as in increased excitement, it may be useful to use depletion to a moderate extent, and as a temporary measure; on the other hand, where there is a deficiency of blood in the system, and a tendency to anæmia is obvious, from the pallidity of the countenance, and the extreme tendency to dropsical effusions, this, generally speaking, will be benefited by a treatment of a more or less stimulant character.

We must consider, likewise, the different kinds of lesions as modifying, in some degree, the treatment. As a general rule, it may be stated (from which, however, there are some exceptions), that diseases of the aortic orifice, connected with a considerable amount of hypertrophy, commonly require a great amount of depletion, and an antiphlogistic treatment. I question if the same treatment should be observed, with regard to medicine and regimen, in lesions of the mitral valves also. This is the general rule; but, still, all is to be done in a gentle way, not carrying the depletory measures to an extreme. The diseases connected with the mitral orifice are more commonly attended by weakness of the system and the circulation, by which the pulmonary organs may be greatly congested: and mild tonics should be administered at the same time, or subsequently to other measures. When the structural disease is considerable, these medicines should be reserved for the periods of intermission. We may divide the exacerbations into two classes: 1st They may take place from mere nervous excitement, mental or otherwise; attacks of violent nervous palpitation, referable to mental anxiety, or something disturbing the digestive organs. Here, palliatives, such as hydrocyanic acid and opium, with mild aperients, will often prove means of relief. There are effects produced by these exacerbations that require attention; when the heart is healthy, the effects will pass off without any remedies: but when the heart is diseased, we have not only to remove the immediate consequences of this excitement, but also the previous morbid effects; thus, if the lungs be congested, means should be adopted to act on the circulation, and keep up the action of the blood; if the liver is affected measures should be taken to act on its secretion, as doses of mercurial medicines. It is a very useful practice in all these cases, to give diuretics, combined with mercury, for a short time, after any attack of this kind. I do not know that anything better can be suggested. In combination with blue pill, henbane and squill, with a little digitalis, if the action of the heart is not very weak, may be given; two or three grains of blue pill, the same quantity of extract of henbane, one grain of quinine, one grain of squill, and half a grain of digitalis, are the best constituents for a pill, and form one of the most useful combinations that I know of, not only for removing congestion, but also the low inflammatory states that are sometimes produced.

Besides these nervous cases, there are exacerbations of a sub-inflammatory character, produced by exposure to cold, over-exertion and the occurrence of rheumatic affections. Under these circumstances, the chief remedies are: moderate antiphlogistic measures; generally local depletion at the region of the heart, by cupping or by leeches, followed by blisters; and mercury and opium are sometimes useful in these cases, but the pill mentioned before answers extremely well. Diuretics should be combined with these until the congestive and sub-inflammatory symptoms are removed. When the patient is extremely weak, so that we are afraid of withdrawing

blood, dry cupping is often useful. This is not, however, so saving a measure as is generally supposed. I have found many physicians recommend dry cupping, under the idea that it saves the blood, but this is a great mistake. It causes extensive effusion of blood into the cellular texture, and the blood is decomposed, and is no longer useful; it is formed into a clot, and must be absorbed again, in an altered state. The exhaustion from dry cupping is much greater than when the sacrificator is used. Besides this remedy, plunging the hands in hot water rendered stimulant by mustard, or the application of a poultice, is useful. If there is anything like a rheumatic tendency, the best kinds of remedies are colchicum, and iodide of potassium, as a means of acting on the secretions. When these temporary exacerbations have subsided, and the circulation is relieved, great benefit will be derived from tonics or mineral acids. The most useful is nitric acid. Gentian, too, is used with benefit. Mineral acids are serviceable where there is a disposition to dyspepsia. In cachetic states, where there is a deficiency in the quantity or quality of the blood, stronger tonics are employed, particularly iron in its various forms.

Complications of Heart Disease.—In cases of disease of the heart, we have likewise to consider the morbid conditions that arise from a defective state of the circulation. Dropsy is the chief of these conditions, and it has to be treated, generally speaking, with diuretics and purgatives. Those diuretics I have mentioned, under the head of dropsy, are useful; acetate of potass is serviceable in inflammatory cases, combined with digitalis or squills, and also sweet spirits of nitre, and spirits of juniper; tincture of cantharides is also allowable; but no diuretic has so good an effect, in such cases, as the pill I mentioned before. Measures should also be adopted to relieve the congested state of the kidneys, where their secretion does not go on. Cream of tartar, &c., is useful. Elaterium is an admirable remedy for getting rid of the dropsy, and improving the action of the liver. It, however, is apt to cause great sickness, and a tendency to faintness, and, generally speaking, cream of tartar, in large doses of from half an ounce to an ounce, taken in the morning, produces free watery stools, to a great amount. It should be continued at the same time that tonics are given. After this, it may be useful to give tincture of digitalis, with the tincture of cantharides. When this dropsy continues, it may be necessary to combine these diuretics with tonics. Dr. Abercrombie recommends a combination of squills with sulphate of iron; but I am not so strongly impressed with its utility. Tartar emetic is very useful in cases where there is not too great weakness. Chalybeates and tonic medicines do much towards promoting the action of the excretory organs, as well as increasing the general strength of the system. The treatment of diseases of the heart is a very important subject. The chief object is to preserve a proper balance in the system: to avoid extremes; and to try to adapt the circulating powers to the existing defects, as well as to avoid all circumstances which overtask the organs of cir-

culation. Gentle exercise, or friction, greatly promotes circulation, and it is also much benefited by the improvement of the excretory and digestive organs. As a general rule, in organic diseases of the heart, the diet should be as nourishing as the digestive organs will bear, without producing fulness or inflammation. The starving plan, in organic diseases of the heart, is most prejudicial. I have seen many cases where this plan has been adopted, and which, with scarcely one exception, were invariably benefited by a return to a moderate nourishing diet. The diet must be proportionate to the digestive powers. There are some few cases, it is true, in which the regimen must be abstemious. These are when inflammation is present, and exacerbations arising from inflammatory action; or else, where there is a great amount of hypertrophy of the heart, and continued increased action, &c. Under these circumstances, the diet must be extremely sparing for a time. But by far the greater number of cases of heart disease proceed from nervous irritability. One great rule, in relation to the diet of a patient affected with cardiac disease, is to take care that the quantity of food taken is not too great in bulk, and, therefore, vegetable food should be avoided as much as possible. This is one reason why a moderate animal diet, in conjunction with farinaceous food, is better than slops, or things of that kind, which distend the stomach without giving it strength. It is necessary, therefore, to avoid any large bulk of liquid. Many patients find out by experience the utility of modifying their diet, so as to make it of as dry a condition as is consistent, taking scarcely more than half a tumbler of liquid at their dinner. If the system becomes encumbered with a great quantity of liquid, mischief results. Further, it is important to avoid anything that will tax the heart, and excite it to excessive and undue action. In severe cases, this should be particularly studied, and the patient should not even be allowed to go up stairs, or ascend to any apartment not on the same floor; he should always walk on the same level. Constantly lying down, or sitting in one position, should be avoided: and walking about, now and then, so as to enliven the system, is desirable. Friction of the extremities, if the patient is too weak to move about, should be employed, two or three times a day, so as to promote the circulation. In many cases, moderate exercise is highly useful, not merely on account of promoting the circulation, but also the action of the various functions of secretion and digestion. Exercise in the open air, and on horseback, is highly desirable; gentle riding answers very well. In this way I have seen cases, that had gone on apparently to their last stage, completely recover. Mental tranquillity is an important element towards recovery.

No absolute rule can be laid down with regard to stimulants. They should be used in the smallest quantities. Malt liquors increase the action of the heart to a great degree. Many persons are in the habit of taking malt liquors, and a certain quantity in these cases is essential to their common mode of diet; so that this must depend

very much on the habits of the individual. Generally speaking, white wine, with a little water, or weak spirits and water, are useful to act on the kidneys.

Ibid. June 29, 1844, *p.* 254.

20.—ON THE DIAGNOSIS AND TREATMENT OF ENLARGEMENT OF THE HEART, CONNECTED WITH INCOMPETENCY OF THE AORTIC VALVES.

By W. Henderson, M.D, Professor of Medicine in the University of Edinburgh, &c.

[In another paper (see Retrospect, vol. 9, page 126,) Dr. Henderson states his opinion of the injurious effects of digitalis in a certain disease of the heart, although eminently serviceable in some other affections. This particular disease is referred to as follows.]

Patency of the aortic opening, at that period when the ventricles are being filled, necessarily admits of regurgitation from the aorta, the effects of which are an overloading of the left ventricle, and gradually an enlargement of it—an enlargement so great ultimately, if the patient survive long, as to exceed, often to a great extent, that which occurs under any other circumstances. * * * Such being the tendency and issue of that overloaded condition of the organ which results from regurgitation from the aorta, it will be granted that whatever increases the amount of the regurgitation must accelerate the progress of the enlargement. That the less frequently the heart beats, the greater will be the opportunity for this regurgitation, is sufficiently obvious; and hence it is, that the prolonged action of the digitalis cannot but be injurious when the aortic valves are not competent for their office. It is not maintained that the regurgitation acts, in producing the enlargement, merely in the way of mechanically distending the left ventricle; on the contrary, it is doubtless true that the increased exertion on the part of the organ at every pulsation, rendered necessary by the greater amount of blood it has to expel and sustain, and the greater frequency with which it almost always pulsates in this disease, contribute to induce that increased nutrition which is characteristic of muscular tissue, the contractions of which are for a length of time more powerful and more frequent than usual.

Assuming, then, that the regurgitation is the cause of the enlargement of the heart, it becomes a matter of much practical importance to reflect on the consequences which may result from the use of means by which the regurgitation may be increased. I adverted in my former paper to the experience of Dr. Corrigan in reference to digitalis, and remarked that my observation concurred with his as to the less satisfactory operation of that medicine in general, in cases of incompetency of the aortic valves, compared with its effects in most of the other diseases of the heart. The allusion which I made to the manner in which the digitalis may be understood to act so differ-

ently in the disease in question from what it does in the others, is quite in accordance with Dr. Corrigan's explanation of the circumstance as expressed in the following quotation:—"If the action of the heart be rendered very slow, the pause after each contraction will be long, and consequently the regurgitation of blood must be considerable. Frequent action of the heart, on the contrary, makes the pause after each contraction short; and in proportion as the pauses are shortened the regurgitation must be lessened." Again, "To retard in such circumstances the action of the heart would be to do an injury. In every case of this disease, in which digitalis has been administered, it has invariably aggravated the patient's sufferings. The oppression has become greater, the action of the heart more laboured; the pulse intermittent, and very often dicrotic, from the heart being unable by a single contraction to empty itself; general congestion and dropsy, if present, have been increased, and in some of the instances *bronchitis* from congestion has been induced; the respiration more laborious, and the strength so much sunk, that patients seemed almost moribund. From this state they only recovered by omitting the digitalis, and putting them on stimulants."

These observations of Dr. Corrigan have been for twelve years accessible to the profession, yet I do not remember to have heard them once acknowledged as just, while I have often witnessed the adoption of the practice which he condemns. Since I perused his paper several years ago, and had learnt how to distinguish the disease of which it treats, I have not had recourse to the protracted employment of digitalis in the treatment of it; but from what I have noticed of its lengthened employment by others, I have no doubt of the accuracy of his doctrine as a general fact. I cannot say, however, that my experience goes to the extent stated by him in the following sentence:—"In no case of this disease did digitalis produce the slightest good effect; and in all, the patients, while under its exhibition, were always worse." On the contrary, I have not unfrequently remarked considerable relief to result from its employment in cases in which the disease appeared to have been of no very long standing, or to have entailed comparatively little dilatation of the left ventricle, and to have produced but an inconsiderable impression on the general health. In several persons affected with the disease, yet still robust or plethoric, digitalis, aided by a moderate blood-letting even, I have known to produce very striking relief to oppression at the chest and difficulty in breathing; and I can account for the strong terms in which Dr. Corrigan expresses the very different results of his experience, only by supposing that his cases were all in an advanced stage when the digitalis was administered. Yet I must add, that even in an advanced stage of the disease, I have not found that "the patients while under its exhibition were always worse;" for it has pretty often happened that the medicine, though continued for a considerable time, had no effect on the frequency of the pulsations of the heart, and was unattended by any change in the symptoms.

What I particularly desire to solicit attention to, is the *general* impropriety of the ordinary practice in diseases of the heart,—repeated evacuations of blood, frequent and prolonged employment of digitalis, and scanty nourishment—in incompetency of the aortic valves ; and as an example of the evils which result from it, I extract the following paragraph from Dr. Corrigan's paper :—" One case may be mentioned, out of many that occurred, showing the bad effects of debilitating treatment on the disease before us, and exemplifying the evil of acting as if one principle were sufficient for guiding us in the treatment of all heart diseases. The treatment ordered was in accordance with that generally recommended, consisting of repeated small bleedings, blistering, the exhibition of digitalis, and the most rigid regulation of diet, a total abstinence from animal food, and even a spare allowance of vegetables and milk. At the time the patient, a young man, was put under this treatment, he was not in an alarming state ; but the disease being recognised as heart disease, he had the fortitude to submit to a course which he was led to expect held out a prospect of cure. Bleeding after bleeding and blister after blister were repeated, starvation enforced, and digital's exhibited, until the patient was reduced to such weakness, that he had scarcely strength to raise himself in bed. The local disease was all this time, however, growing worse ; for the palpitation, cough, &c., were, from the slightest cause, increased to a greater violence than previously to the commencement of the treatment. The plan was nevertheless, persevered in, until the patient's death being supposed at hand, this debilitating treatment was discontinued. From that hour the patient got better ; and as his muscular strength returned, the embarrassment of breathing, palpitation, cough, &c., became less and less urgent. The patient is still alive, the disease is still present ; but with full living and good air he is able not only to take considerable exercise, but even to undergo the fatigue of a business that constantly requires very laborious exertion." (P. 241.) I can adduce no example so fully illustrative of the truth and importance of the practical views promulgated by Dr. Corrigan. I have, however, witnessed some cases in which the depleting and reducing plan had aggravated the sufferings, and others in which good diet and exertion, not carried to an extreme, had been felt the best adapted to the comfort and ease of the patients. One instance I remember of a porter, affected for a long time with this disorder, who continued for years fit for his laborious occupation, indulging repeatedly during the day in potations of malt liquor ; and whether we credit his account or not, that he felt them necessary to the freedom of his breathing, &c., I was satisfied that, under the exciting influence of them, he exhibited no evidence of that suffering which could not fail to have been produced in any other kind of diseased heart, equally considerable, by the same habits.

Northern Journal of Medicine, August, 1844, *p.* 223.

[We may here give a few remarks of that excellent physician Dr.

Schonlein of Berlin, on the use of digitalis on some diseases of the heart. He says—]

Objections, have recently, been made to the employment of digitalis in diseases of the heart, by the English physicians more particularly, among whom we may especially mention Dr. Stokes. This gentleman exclaims chiefly against its employment in affections of the valves of the heart. I give due weight to the opinion of this physician, especially as I myself, previous to being acquainted with his researches on the subject, had made the observation that digitalis should be used with circumspection in diseases of the heart, as it may readily have a paralysing effect upon the activity of this organ. I cannot, however, so strongly condemn the application of digitalis in diseases of the valves of the heart, as Stokes has done; for the more tumultuous the contractions of the heart, the greater the disturbance induced, and the more frequent the intermissions which take place between these beats. Nature will but rarely cause such intermissions of the pulse, if the contractions follow each other slowly. You will see, therefore, that digitalis, in rendering the pulse more slow at the same time almost renders it more regular. Let us, however, consider the question in its true point of view. The point in question is: the impediment in the circulation of blood, and the power which the heart requires to overcome the impediment. If this impediment be very considerable—if it be a consequence of *stenosis* or constriction of the heart—of complete ossification,—then every remedy calculated to act against the energy of the heart, which alone can conquer this impediment, must have an injurious effect; in such cases, therefore, you will use exciting means; as, for instance, external irritation of the skin (sinapisms); and internally naphtha, and the preparations of ammonia. The whole difficulty of the question, I think, lies in this point. The only question, in fact, now is—are there phenomena, by which we may obtain, during life, such information as to judge of the magnitude of the impediment? We certainly answer in the affirmative. They consist in the degree, the quality, and the intensity of the sounds which we perceive by the stethoscope. If the simple bellows murmur is existing, we may presume that the impediment is not a very considerable one (only partial ossification of the valves); the more the sound approaches, however, to that caused by a file or rasp, the more it has a metallic, wiry, cutting sound (which, in this instance, is not the case), the more we may calculate upon a greater degeneration of the valves; and digitalis, in this latter case, should be employed with considerable caution. Some medical men, in order to evade this difficulty, have made use of the *tinctura digitalis ætherea*, a preparation consisting of naphtha and digitalis, but which latter is contained only in very subordinate proportions. The effect of digitalis is very different in different individuals, provided always that it be genuine; it must not be imagined that large doses are required for the production of its effect. I have frequently found that the powder of digitalis, from half to one grain, administered four times a-day, very soon

exhibited its positive effects. It is better, therefore, to commence with small doses, and to increase them cautiously, if the desired effect is not produced. I have also found that the effect of digitalis may manifest itself even four or six days after having discontinued the remedy.

Med. Times, April 27, 1844, *p.* 67.

21.—ON THE ACTION OF DIGITALIS.

By William Munk, M.D., Physician to the Tower Hamlets Dispensary

[This communication is founded on upwards of 400 experiments, extending over a period of five years. They were made chiefly to ascertain the effect of the remedy in diseases of the heart. In 184 cases the drug was given alone or mixed with simple vehicles, as sugar or tragacanth when given in the form of powder, and in water when the infusion or tincture was given. This ought to be particularly remembered, as no drug is more modified in its action by combination.

Digitalis has two very important effects, one on the heart as a *sedative*, and the other on the kidneys as a *diuretic;* and it is generally given either in the form of powder, tincture, or infusion. We think the following remarks of Dr. Munk on the different effects of the tincture and the infusion very important, and which ought to be invariably remembered in the treatment of those diseases of the heart or the kidneys which require their separate or combined administration.]

The tincture (says Dr. M.) has uniformly appeared to me to be the form in which digitalis acts with the greatest certainty and effect upon the heart; while, as regards the diuretic influence of the drug, I have derived incomparably the most advantage and satisfaction from the infusion. This, I believe, will be found accordant with the experience of most physicians; and, if borne in mind, will, to a certain extent, assist in reconciling some of the contradictory views entertained by different practitioners, as to the proper and usual action of the drug.

In a letter which I received in the course of last summer from an experienced provincial physician, who, in the course of a forty years' extensive consultation practice, had given digitalis very largely, I find the following remarks:—"There are few remedies which I have employed more frequently or extensively than the purple foxglove. I consider it the most certain and powerful diuretic at our command. It has a wide sphere of utility; for, by combination, it may be made applicable to many states or conditions of the system. Of its reputed effect upon the heart I know nothing: I have but rarely seen such an effect produced, and believe it only occurs when the kidneys refuse to act, and the poisonous influence is about to develop itself; of which poisonous influence I consider such symptoms to be, in all cases, the prelude. If," continues my

venerable friend, "you believe in the so called sedative influence of digitalis, as a thing to be frequently witnessed, and, moreover, administer it with that intention; I can only say, on the one hand, I doubt the accuracy of your observation; and, on the other, you are an unsafe practitioner, and do your utmost to murder your patients." Now in contrast with this very decisively-expressed, and, as it seems to me, most exclusive view, it may be well to quote here the opinion entertained by a very competent authority on diseases of the heart —the late Dr. Thomas Davies:—"No means" says he, "excepting the abstraction of blood, diminishes the impulsion of the heart so completely and so certainly as digitalis. I have been in the habit of using it for several years for these affections, and have rarely seen it fail in producing at least temporary relief."

Two more discordant statements than these could scarcely be placed in apposition, yet both have been the result of extensive practical experience, and, however contradictory they may appear, must therefore necessarily have some foundation in truth. Their explanation is to be found in the different forms, in which the medicine was prescribed. My correspondent invariably employed the infusion, the only form in which he had any confidence; whilst Dr. Thomas Davies, I am informed, deduced his opinion from an extensive employment of the tincture. I am inclined to believe, from the remarks of one or two professional friends, who entertain what I consider one-sided views in regard to digitalis, that much of the discrepancy of opinion existing upon this point will, if more minutely investigated, resolve itself into this—that a conclusion has been deduced from the exclusive employment of one only of the officinal preparations of the drug.

The powder appears to me the least certain and the most unmanageable of the preparations of digitalis. I have carefully watched its administration in nearly forty cases; and, in the majority of instances, it has neither influenced the heart nor increased the flow of urine. When prescribed alone it has seemed to me next to useless, and in no degree comparable with either the tincture or infusion. In combination, however, the case is somewhat altered; for, given in the well-known pill, with mercury and squills, it constitutes an admirable and efficient diuretic. I have not succeeded, however, by any combination, in concentrating its action in a kindly manner upon the heart. In some instances it has seemed for a time altogether inert; when subsequently its effects have suddenly appeared, the heart's action has become intermittent, nausea, and a tendency to syncope, have been manifested; and the general condition of the patient became such as to render the discontinuance of the medicine necessary. As an efficient and manageable sedative I consider the power of digitalis, therefore, to be comparatively valueless.

By the term 'sedative action of digitalis' I mean to imply the direct influence exerted by the drug upon the central organ of the circulation. This is of so marked and peculiar a character as to

have induced a recent writer to designate digitalis as the opiate of the heart. "It is," says Bouillaud, "incontestibly the most efficacious and direct of all sedatives—the true opium of the heart."

[The heart is affected in two ways by digitalis. The drug may act either as a depressant or as an antispasmodic.]

It is less frequently required, and less frequently exhibited as a depressing agent, than as an antispasmodic or diuretic. As a depressant, it is called for only where an increase of impulse is a well-marked and abiding symptom: and as this—pericarditis and endocarditis being excepted—occurs only in hypertrophy, either simple or combined with other organic lesions, it is in these only that the drug, as a depressor of action, is admissible. Augmented impulse, then, is the symptom, and hypertrophy, as its cause, the pathological condition, which should direct our attention to digitalis, and induce us so to administer it as to obtain its depressing influence.

For this purpose, it will be best to administer the tincture in tolerably full doses, at intervals of eight, ten, or twelve hours. I have not found that the efficiency of digitalis in this direction can, as a general rule, be augmented by combination. It has been tried with hydrocyanic acid, the mineral acids, colchicum, nitrate of potash, conium, and hyoscyamus; but I have found, in such admixtures, so little satisfaction, that when I desire to reduce the action of a heart overgrown in its muscular structure, and attempt such an object by digitalis, I now invariably prescribe it *per se*.

The antispasmodic property of digitalis is that which renders it so peculiarly useful and extensively applicable a remedy in cardiac disease.

The effects of digitalis as a depressing agent are most satisfactorily and certainly produced when the tincture is administered alone, but it is in combination only that its antispasmodic properties can, as a general rule, be obtained. Given in combination with camphor, assafœtida, or galbanum, ammonia, Hoffman's anodyne, or the other drugs classed under the general name of antispasmodics, it seldom fails to quiet, more or less, the tumultuous beatings of an irritable or mobile heart, provided the impulse be not at all, or not materially augmented. Thus employed, it will exert the most beneficial influence on palpitation, oppression, and distress in the præcordia, will relieve the hurry of breathing, and calm that irritability of body and of mind so generally witnessed under such circumstances.

That this effect is owing to the digitalis, rather than to the medicines with which it is associated I have repeatedly assured myself, by withdrawing the former and continuing the latter: a loss in the amount of controul over the heart has been the general result. The converse of this has been also tried: the camphor, ether, or ammonia have been withdrawn, and digitalis alone continued. Under such circumstances, the depressing, and not the antispasmodic effects have been observed. I shall content myself with the bare expression of this fact, without attempting to theorise upon it. It would, however, be an interesting question to decide, whether digitalis directs, as it

were, the action of the combined medicines upon the heart; or, on the other hand, whether the combined substances merely oppose and neutralize its depressing influence. That some of the drugs which I have combined with digitalis exert an influence on the heart of a quieting character I feel perfectly sure. Camphor and assafœtida are perhaps the best marked in this respect, particularly the former. The influence of camphor upon the heart, and its applications to particular morbid states of that organ, is, I am convinced, an inquiry full of interest: it is one upon which little or nothing has yet been done, though I am convinced it would afford important practical results to any one who, having time and opportunities, would enter upon its investigation.

[The drug has not been found efficacious in a plethoric state of the system. Blood letting, and other evacuant measures, ought here to be first employed; and digitalis may come in as a valuable auxiliary at a later period, when the tension of the vessels has been reduced. It ought not to be administered when the gastric and intestinal mucous membranes, especially the former, are in a state of irritation. In these cases Dr. Munk says, "that he has found it impossible to obtain either the depressing or antispasmodic effects of digitalis; on the contrary, the stomach has been irritated by its use; all the gastric symptoms have been more or less aggravated; and, the heart sympathizing, its action has been excited." In these cases hydrocyanic acid will be found an admirable substitute for digitalis.]

When the various circumstances which I have now enumerated receive a proper share of attention, and the tincture of digitalis is administered (either alone or in combination, according as we desire its depressing or antispasmodic effects), in doses of from 10 to 30 minims every eight, ten, or twelve hours, we shall rarely, I believe, be disappointed in obtaining its full action on the heart.

The diuretic action of digitalis renders it a peculiarly valuable remedy in many kinds and stages of cardiac disease. It might, perhaps, be anticipated that this was in a great measure attributable to its acting at the same time in a direct degree upon the heart; but such I conceive to be very rarely the case. All the benefit which results from digitalis when it operates upon the kidney is attributable to its mere diuretic action. Any effect upon the heart itself is indirect, and owing to the diminution in the mass of the circulating fluid by the draining away of its more watery constituents. Digitalis, indeed, but seldom operates as a diuretic when its action on the heart is prominently marked; and, conversely, it but seldom manifests its action on the heart when free diuresis results from its employment. To this conclusion I was led at an early stage of my experiments; and I feel much satisfaction in finding, from the "Dispensatory" of Dr. Christison, that this accomplished physician entertains the same view. "According to my experience," says he, "the sedative and diuretic actions do not concur. I even suspect that they are mutually incompatible."

Dr. Withering, to whom the profession are indebted for the first, and by far the best work which has yet appeared on this drug, affirms that it more frequently and certainly succeeds as a diuretic than any other medicine; and that if it fail, there is but little chance of any other remedy succeeding. In this statement I fully concur, provided the conditions so explicitly laid down by that physician as indicatory of its applicability be regarded. These, it is well known, consist of phenomena which point to an enfeebled and broken condition of the system. It seldom succeeds in men of great natural strength, of tense fibre, of warm skin, of florid complexion, or in those with a tight and cordy pulse. On the contrary, if the pulse be feeble or intermitting, the countenance pale, the lips livid, the skin cold, the swollen belly soft and fluctuating, or the anasarcous limbs readily pitting under the pressure of the finger, we may expect the diuretic effects to follow in a kindly manner. These remarks were penned, it is true, in reference to dropsy, from whatever cause arising; but, *mutatis mutandis*, they are equally applicable to all cases in which the diuretic operation of foxglove is required. And in the few remarks I am about to make on the use of digitalis as a diuretic in diseases of the heart, I have little more to do than make a special application of them to the individual lesions of the organ.

Diuretics become useful in diseases of the heart, by drawing off the aqueous portion of the blood, and thus diminishing the quantity without materially deteriorating the quality of that fluid. In this manner, by lessening the heart's duties, and unloading the morbid tension of the vessels, they relieve palpitation and dyspnœa, and *obviate* infiltration without materially reducing the strength; while in cases which have proceeded to a greater extent, and are already accompanied with dropsical effusions, they act most beneficially, by bringing about their absorption and ultimate elimination through the kidneys. The two conditions of system particularized by Dr. Withering are daily witnessed in connection with diseases of the heart; and whether a diuretic action be required to relieve oppression and diminish congestion before dropsical effusions have taken place, or, where these already exist, to remove them, digitalis will prove a proper and efficient, or an improper and inefficient means, according as an asthenic or sthenic condition of system shall prevail.

In hypertrophy the symptoms may be, and indeed are, frequently susceptible of material alleviation by a free diuretic action. It is seldom, however, that digitalis is an appropriate remedy; for the conditions of tone which contra-indicate its employment, and prove an obstacle to its efficient action on the kidney, may, as a general rule, be said to exist here in all their intensity. In simple and concentric hypertrophy it is only where the powers of the system are giving way, and the fatal event is close at hand, that digitalis, as a diuretic, might, from the general symptoms, be supposed an appropriate remedy. But here time enough does not remain to us to relieve the sufferer by the comparatively slow process of diuresis,

even were that action, if produced, competent to bring about such a result. The sinking which characterizes the latter periods of such cases is only to be alleviated, if alleviable, by stimulants, and these often of the most energetic kind, and administered with a liberal hand.

In dilatation, digitalis will often be found a very appropriate remedy, and will generally operate with more certainty and efficiency than any other diuretic. Here we usually find a weak, unsteady, or intermittent pulse; pallor or lividity of countenance; cold extremities; and, when dropsical effusions have supervened, a flabbiness of the œdematous parts. These are precisely the conditions to direct attention to digitalis. Here it will operate with much certainty upon the kidneys; and should the case be one to be benefited by diuretics, in foxglove we find that which is most appropriate.

It is in valvular disease, however, that diuretics in general, and digitalis in particular, prove of the greatest utility. Under a free discharge of urine, the cough, dyspnœa, and the præcordial load and anxiety subside, and the serous effusions diminish, or altogether vanish. The applicability of digitalis as a diuretic, in valvular disease complicated with other organic lesions of the heart, will be best determined by the greater or less approximation of such superadded condition either to dilatation or hypertrophy. As the one or other of these exists, so, as a general rule, will digitalis be found either an appropriate or an inappropriate medicine.

The diuretic action of digitalis may be materially assisted by attention to certain circumstances, which I shall now briefly enumerate. The preparation employed is a point of considerable importance; and in my hands none have acted with so much certainty and activity, whether administered alone or in combination, as the infusion. This may certainly be considered *the* diuretic form of the drug; and from its administration, in doses of from half an ounce to an ounce every six or eight hours, I have generally derived all the good that can legitimately be expected from diuretics. Although the infusion rarely displays any very decided action on the heart, but seems, in general, to concentrate all its energy upon the kidneys, I have nevertheless been induced, by the suggestions of Dr. Bree, to use every means to prevent the sedative operation of the drug. When administered as a diuretic, I request the patient to take, if possible, moderate exercise; just so much as the cardiac symptoms and general bodily condition will admit of without distress, but, in all cases, short of producing diaphoresis. A moderate quantity of drink is often advantageous; and keeping the loins warm, as by covering them with a double or triple layer of flannel, or applying a warm and stimulating plaster, as recommended by Dr. Lombard, will be found, in many cases, an important adjuvant.

[Many practitioners entertain fears of an untoward result from a long continued use of this preparation. Dr. Munk has never witnessed such a thing; and he is supported by the most recent and best

writers on the subject; among whom we may name Dr. Holland and Dr. Pereira. Dr. Munk ends his very interesting paper with the following remarks.—]

I am in the habit of prescribing digitalis, in the usual doses, for a week; and if, within that period, I perceive neither sedative nor diuretic effects, I then invariably desist from its administration. Let these effects, however, be once kindly induced, and the medicine may then be continued with safety for a considerable period. In no one instance have I seen a bad effect follow the use of digitalis where the first consequences of its exhibition were the removal or material alleviation of prominent or distressing cardiac symptoms, whether this has been brought about by its operation as a sedative or as a diuretic.

A remedy, it has been well observed, can scarcely serve and hurt the constitution at the same time; and digitalis, where it gradually and in a kindly manner abates the heart's action, or stimulates the kidneys to increased secretion, never, according to my experience, accumulates, or produces, in a prominent degree, those alarming symptoms upon which writers have so amply dilated.

Guy's Hospital Reports, Oct. 1844, *p.* 295.

22.—EFFECT OF ALKALIES IN PREVENTING HEART DISEASE IN RHEUMATISM.

By J. J. Furnivall, M.D., London.

[Dr. Furnivall does not, in his paper on this subject, enter on the whole details of the treatment of rheumatism, but only so far as prevention of heart disease is concerned. He reminds us of a remark of Dr. Wigan, who, referring to the perspiration in rheumatic cases, writes—"I had often observed that scissors and other articles of steel, and even the fire-irons in the bed-room, were rusted in a short time, as if they had been subjected to the steam of vinegar."]

Now, says Dr. Furnivall, as we know the perspiration and urine to be secretions eminently depuratory of the blood, it appears to me that an unusually acid state of these must involve a supposition that the blood itself, instead of being gently alkaline, as in health, has, by disease, undergone a modification, approaching to a reverse condition, and that it is labouring to relieve itself of its morbid load through these secretions. If this be correct, we cannot doubt that such a state of the blood must prove highly morbidly stimulant to the heart and whole arterial system, as well as to their associated nerves; thus we might, at once, account for the general excitement of the arterial system, and, perhaps, for the violent pains which are so marked in acute rheumatism.

Besides this state, it is now believed that there is in this disease a great increase of fibrine in the blood, and the more acute the attack the greater the quantity of fibrine. Andral, in his "Hæmatologie Pathologique," tells us that the quantity of fibrine in healthy blood varies from 2.5 to 4. in the 1000 parts; but that in articular rheumatism the mean increase fluctuated between 7 and 8 per 1000, and the maximum increase amounted to 10.2, or more than triple its natural quantity.

We have, then, two morbid states of the blood in this disorder, which must powerfully tend to excite inflammatory action in the serous membranes of the cardiac ventricles, and of the left ventricle in particular. The subversion of the alkaline state in the blood could not but prove highly exciting to the endocardium, thus causing hypertrophy and inflammation; while the superabundance of the fibrine tends to favour the formation of deposits within the fine interstices of the cardiac valves and parts adjacent, leading to an embarrassment of their action, until the valves can no longer subserve their natural functions.

In addition to these causes, we know that the chosen site of rheumatic action is the fibrous and fibro-serous textures, and as these textures abound in and about the heart, we have thus another cause powerfully determining the morbid action of the heart.

From the earliest years of my practice I have tried alkalies in rheumatism, but not in an efficient manner. I found them always of service, but only as auxiliaries, the general excitement and inflammatory phenomena requiring the additional use of other remedies; but since 1830 I have used alkalies more perseveringly than before, chiefly the liquor or carbonas potassæ, and I have not ceased giving them until after the marks of an acid diathesis had disappeared, or that the alkalies disagreed with the stomach, which latter circumstance has rarely happened.

Since that year I do not believe that one case of heart disease in acute rheumatism has occurred during treatment in my practice, where the alkaline treatment has been fairly carried out; and I must have, during the time mentioned, treated at least fifty such cases, without counting any examples of chronic or subacute rheumatism.

Now, as heart disease is said to occur very frequently (it has been said in one out of every three cases), it will be well worth while to try what I recommend, and to substantiate my correctness, or to prove that I am mistaken in the benefit to be derived from an alkaline treatment; and, as an additional recommendation, the medical man can, and ought to, prescribe other remedies at the same time. During the years mentioned, my practice was carried on in the country, and was of such a nature that if any one fell ill again, who had once been under my treatment, he would have probably applied to me again, or I should have heard of the recurrence of disease. In proof of this, I may mention that my notes contain the cases of many who have been under my care for the

second or third time. It is this circumstance of my having been able to watch the after-progress of my patients that gives weight to my assertion; for, in a metropolitan or a widely-spread practice, relapses or fresh attacks might occur, and yet the practitioner hear nothing of them.

I have already said that I do not solely rely on the alkali, excepting as a prophylactic against heart disease in rheumatism, for although I had heard of a practice, general in some parts of England, of giving alkali, and I had also heard of the success of such treatment, yet I found myself obliged to combine it with other remedies. I do not mean, in the present paper, to go into the detail of the different modes of treatment, nor to describe the indications, pointing to one mode of treatment rather than to another, but I would ask those medical gentlemen who are well placed for such an experiment, to make a *persevering* trial of adding moderate, yet not too small, doses of the liquor or carbonas potassæ, to colchicum, or to any other (not chemically incompatible) remedy which they may be in the habit of prescribing; and I would ask them to watch and report the result, whether in confirmation or refutation of the ætiology here propounded. My own conjectures as to the *modus operandi* of the alkali are, that it may act in a four-fold way:—

First.—As a neutraliser of the acid predominant in the system, and as a restorer of the alkaline condition of the blood.

Second.—As a thinner of the fibrine superabounding in the blood; for the physiologist of these days correctly maintains that a gently alkaline condition is essential to the normal fluidity of the blood.

Third.—It may act as a sedative, indirectly, by the two first modes of action.

Lastly.—It may act as a diuretic, thus helping to carry off the morbid elements of the blood.

According to Andral, and others, blood-letting shows little or no power, either in diminishing the fibrine, or in curing the disease, and cases of acute rheumatism are on record in which heart disease occurred, in spite of a treatment very active, and in every respect able, excepting that no alkali had been given. On the other hand, the cases treated by myself, and where alkali was pretty freely given, show a marked exemption from heart disease.

Lancet, June 1, 1844, *p.* 304.

23.—*Characters of the pulse in diseases of the heart.—In contraction of the aortic orifice* the pulse is regular, and preserves its natural strength and fulness, unless the obstruction be extreme, when it becomes small, weak, and, in some rare cases, intermittent.

In the regurgitant lesion of the aortic orifice, the pulse is almost pathognomonic of the disease; it is regular, but jerking and receding, and the pulsation of the arteries is visible. This depends upon these vessels being incompletely filled, owing to a portion of the blood

transmitted by the systole of the left ventricle returning into the ventricle during its diastole. In addition, in this valvular lesion, the radial pulse follows the ventricular contraction at a somewhat longer interval than in the healthy heart. These characters of the pulse will be better marked when the left ventricle is, in addition, hypertrophied and dilated.—*Dublin Medical Press.*

Lancet, July 27th, 1844, *p.* 558.

24.—*Agents affecting capillary circulation.*—M. Poiseuille has established the fact, that nitrate of potass or acetate of ammonia, added to water or serum, renders it capable of flowing more rapidly through either inorganized tubes, as those of glass, or organized, as the vessels of animals, whether in a dead or living condition. Alcohol has a precisely opposite effect; it checks the fluidification of humours, and retards the flow of fluids, in capillary or other tubes.

Prov. Med. Journal, July 17, 1844, *p.* 242.

25.—*Cynanche tonsillaris, treated by guaiacum.*—[A few years ago, we drew attention to a paper by Mr. Bell on this subject (see Retrospect, vol. 3; art. 9). Dr. Morris, of York, has published some cases of a similar description, and strongly recommends the same treatment to be adopted. The following case will be sufficient to illustrate this mode of treatment.]

Mrs. W——, aged 35. Ill seven days. Had great pain and difficulty in swallowing for the last week. Pulse moderate; tongue foul; bowels slow; the tonsils almost touching, dark red.—*Sumat statim magnesiæ sulph. ex aquæ* ℥viij.—*R. pulv. guaiaci* ℥iv.; *mucilagini syrupi āā* ℥j.; *aquæ cassiæ* ℥ss.; *aquæ* ℥vj. *M. Sumat* ℥j. *ter in die.*

Nearly well. Tonsils still slightly enlarged.—*Pergat.*

London and Ed. M. J. of M. S., November, 1844, *p.* 949.

26.—TREATMENT OF HÆMATEMESIS.

By C. J. B. Williams, M.D., Professor of Medicine in University College, &c.

[When a patient vomits blood, he is to be treated according to his constitution, and the quantity discharged. When this occurs in plethoric subjects, or when there is much fever, it will not be desirable at first to check the hæmorrhage: but when it arises from the intestinal canal, it is highly necessary to increase the natural secretions of the abdominal viscera, and especially that of the liver. This will be done most effectually by calomel or blue pill, with saline aperients, followed next morning by sulphuric acid and sulphate of magnesia.]

When the hæmorrhage is more considerable, and the patient appears to be much weakened by it, we must adopt immediate measures to arrest it; and this may be done pretty surely— if no organic disease is connected with it—by sugar of lead combined with opium;

and, likewise, oil of turpentine, in small doses, seems to act very effectually here: from 15 to 30 minims for a dose, repeated four or five times a day. In persons already considerably blanched, and in whom the hæmorrhage appears to be quite of a passive character, unaccompanied by any increased action, the muriated tincture of iron is useful. In the scorbutic forms of the disease, tonics and astringents are commonly employed; oil of turpentine and creosote, with other measures to support the strength of the patient. Even here it is necessary to see that the secretions are free, and to promote this, muriatic acid is sometimes useful. Melæna is merely a modification of this affection, and the treatment is the same. There may be a discharge with the fæces of the blood, or matter of pitchy blackness; and, sometimes, there is, accompanying it, pain in the iliac and hypochondriac regions, and great agitation and pulsation. It is necessary to purge freely; castor oil, and a few drops of turpentine, are very useful, and acid mixtures, in most cases, are serviceable in promoting the natural secretion, and tending to arrest the bloody flux.

Treatment of Diarrhœa.—The *treatment* of the more serious forms of *diarrhœa* is to be guided by circumstances. Where it is of the mucous form, and is accompanied by pain, griping, and tenderness in the abdomen, it must be treated by mild antiphlogistic means; and it may, in some cases, be necessary to apply leeches to the abdomen or to the anus: in severe cases, fomentation or a warm bath, and blisters on the abdomen, may be necessary. In the great majority of cases, it is necessary to increase the action of the liver. Mercurial purgatives, of sufficient strength, should occasionally be given, as well as astringents, to stop the diarrhœa. It is very frequently the case, that the flux is so excessive that it is desirable to check it, but here the cause of the flux is to be considered. If the irritation is excessive, it is necessary to combine, with the other remedies, narcotics and sedatives; and if the griping pain is severe, and the quantity of the flux is so great as to weaken the patient very much, it may be advisable to combine calomel with the opium. In many cases of diarrhœa, I give a dose of calomel with conium, to work briskly through the intestines, where the diarrhœa has resisted the operation of astringents. The exhibition of this remedy must depend on the state of the diarrhœa. If there has been previous constipation of the intestines, or if improper food, or the distension of the abdomen with fæculent matter, have been the cause of the diarrhœa, then a purgative may be given without any opium at all. Generally, if the pain is excessive, calomel, combined with conium, is a good thing, followed by castor oil or senna. If the diarrhœa continue long, and there are no signs of fæculent accumulation, where the diarrhœa seems to arise from the irritation of the flux, rather than from biliary obstruction, and if there is no pain, mild astringents answer best: after the bowels have been evacuated, a mixture of chalk and aromatics seems to have the desired action.

Opium has the effect of relieving the pain for the time, but, from its tendency to arrest the secretion of the liver, it increases the mischief afterwards. In some cases, if the diarrhœa continues in spite of the milder astringents, metallic astringents become necessary, such as sugar of lead, or sulphate of copper, combined with opium. If these fail to produce a beneficial effect, then astringent injections are of great use; as a solution of alum, and sulphate of copper. I have stopped the diarrhœa by an injection of nutgalls, in cases which had resisted every other treatment.

After the diarrhœa has been stopped, it is necessary to take care that no inflammation succeed, for these fluxes, when stopped too suddenly, tend to produce inflammatory lesions; and, when any disposition to this occurs after the stoppage, it may be necessary again to give aperients to open the bowels. If the inflammation is severe, fomentation or blisters may be desirable. It is often necessary, after the continuance of diarrhœa, to give, alternately, astringents and aperients, until the bowels have got into regular action, and appear to have resumed their healthy state. The natural condition of the bowels is thus to be restored, and kept up, partly by medicine, and partly by diet. It is of the greatest consequence, in the treatment of diarrhœa, to confine the diet to the mildest farinaceous food, such as arrow root, rice, gruel, sago, and things of that kind, avoiding animal food. The patient must be kept quiet in bed; and to get the bowels and other organs into tone, it is often useful to give tonics, such as cusparia bark and mineral acids; and, sometimes, rhubarb and magnesia, combined with tonics, are of considerable efficacy.

Med. Times, Aug. 3, 1844, *p.* 439—441.

27.—*Treatment of Enteritis.*—The treatment of enteritis must be antiphlogistic, combined with medicines calculated to ensure the opening of the bowels. Blood-letting may here be carried to a greater extent than in gastritis, as, in the early stage of enteritis, there is less prostration of strength, and less disposition to sinking. Leeching should be combined with blood-letting, and also poultices and fomentations to the abdomen. If the inflammation continues long, and the pain is excessive and unremitting, the use of calomel may be resorted to. If the disease has been but of short duration, and has lasted only a few hours, or is of a less severe form, it is better to begin with a dose of calomel, to secure the evacuation of the bowels, before the antiphlogistic measures are tried; but if the disease is of longer standing, it is better to use the antiphlogistic treatment, first, and then follow with purgatives, &c. Of all the purgatives that I could name, I do not know of any that can be put in comparison with calomel; and for this purpose, it should be given in pretty considerable doses, of from five to ten grains, combined with James' Powder, and with sedatives. Opium has been recommended to deaden the inflammation, but its effect is to interfere with the peristaltic action of the bowels and block up the secretion from the liver. I therefore prefer using conium, which is more soothing; five grains,

or even more, should be given with the calomel: belladonna answers the same purpose. The dose may be repeated in three hours, if it does not operate; and after this, injections of castor oil—three or four drachms—mixed with a little gruel or the yolk of an egg, or something of that kind, should be used to promote the action of the bowels. If the bowels are not opened by these means, more active aperients may be tried, and it may be expedient, to use a few doses of croton oil. In combination with this antiphlogistic treatment, turpentine may sometimes be used with success. Frequently it happens in these cases, that there is a great deal of spasmodic action, but whether such is the case or not, turpentine does not appear to be so injurious a medicine in intestinal inflammations, as one might be led to expect. By some it is considered to be an antiphlogistic remedy; it is certainly remarkable how it tends, in some cases, to the dissipation of the symptoms and products of inflammation. Sometimes it is used in peritonitis, under the supposition that it is antiphlogistic. At any rate, in the form of an injection it answers well, and relaxes the spasm.

If all these measures fail, the best thing to resort to, for the purpose of exciting the action of the bowels, is the tobacco injection; no permanent relief can be obtained until this action is effected. The mode of application is a scruple of tobacco infused in half a pint of water, and the injection to be retained for ten minutes. Some persons recommend the smoking of tobacco as being effectual; it certainly is very easy of application. The greatest exertion should be employed to open the bowels, for, when this is effected, a great part of the battle is gained; we should scrupulously look to this object, and not be content until it has been effected. The remedial measures must be repeated again and again. After the bowels have been freely opened, then becomes the time for opium; it is of great efficacy and utility then, and it may be advantageously combined with mercury; or if opium cannot be borne, morphia may be given; the object being to remove the effects of the inflammation. The reason why opium is used, is that it tends to bring the intestines into a quiescent state; they are unhealthy, and are highly irritable, and this constant irritation gives them an undue action; and there is very apt to occur, after the constipation has been overcome, diarrhœa accompanied by great prostration of strength. It may, also, be necessary to use fomentations and blisters, where there is considerable pain and tenderness of the abdomen. If the parts feel raw and sore on the passage of the feculent matter, the local antiphlogistic treatment must be continued, so long as these sensations remain.

It frequently happens in enteritis, that, besides tympanitic distension and obstruction, in the early stage, there is a hardness in some parts of the abdomen, a feeling of induration communicated to the touch. Usually, however, there is great soreness and tenderness felt, more commonly in the left iliac region than elsewhere. It appears to me that this must be the result of the internal thickening of the intestine; and so long as it lasts, there is a great tendency to

a recurrence of the obstruction ; and it is necessary to be extremely careful to administer medicines from time to time, to keep up the regular action of the canal. The best medicines, for this purpose, are castor oil or mild salines, as sulphate of potash, and sulphur. Castor oil is the safest of all medicines. It is of very great consequence, after an attack of enteritis, to avoid exertion too early, and particularly to avoid any error of diet, and the use of any irritating medicine. The great reason of this precaution is that there is a considerably impaired state of the functions of the canal, and so long as this is the case, all irritating things tend exceedingly to produce a relapse. The diet should be as plain, mild, and simple, as possible : chiefly consisting of farinaceous articles of food.

Med. Times, August 3, 1844, *p.* 360.

28.—ON PERITYPHLITIS, (OR INFLAMMATION OF THE CELLULAR TISSUE ADJACENT TO THE CŒCUM.)

By W. Seller, M.D., &c., one of the Physicians to the Royal Dispensary, Edinburgh.

[This disease does not seem to have been much studied by Practitioners. It is alluded to in Copland's Medical Dictionary under the term "Pericœcal Inflammation," and by Mr. Syme in his principles of Surgery. Dr. Seller adopts the term Perityphlitis for want of a better name.]

The disease in question is of an acute though insidious character, has its seat external to the peritoneum, in textures of a cellular structure, and, unless neglected at first, is more prone to resolution than to the formation of pus ; when suppuration does occur, the pus is almost invariably evacuated by the rectum.

Tenderness on pressure, hardness, dulness on percussion, and circumscribed swelling of the abdomen, adjacent to the anterior part of the crest of the right ilium, while the integuments move freely over the tumour, are the prominent and least variable symptoms of this disease. In extent the part so affected varies considerably. But when, as happens sometimes, the swelling reaches across the abdomen towards the linea alba, or upwards obliquely towards the umbilicus, the disease should be suspected of having lost its original singleness of character, and of having passed into an inflammation of the peritoneum, or even perhaps of the coats of the bowels.

Pain of the upper part of the thigh in front, increased on motion, is either not a constant symptom, or is so trivial in the majority of cases as to have escaped the notice of most observers. In the cases which I have seen it was present, though not remarkably severe ; and in that with the particulars of which I am best acquainted, it was the pain rising upwards from the thigh which first led to the discovery of the real seat of the disease. Probably the function of the bowels is never altogether unaffected ; yet the degree in which intestinal disturbance is present has a wide range.

The disease is apt to come on insidiously; the colic pains which most commonly usher it in may last only for a few hours, or may recur at intervals for several weeks, before the swelling appears. The disease is of uncertain duration—chiefly, however, owing to the unequal periods over which the precursory symptoms are spread. When the precursory period is short, the disease uncomplicated, and the treatment appropriate, a cure may be looked for in ten or twelve days from the commencement.

A degree of induration, however, occasionally remains, which, though not dissipated for some time, gives but little inconvenience. There is observed in some patients a disposition to the recurrence of the disease for a longer or shorter period after it has subsided. In one person it occurred three times within a period of sixteen months. But this is not the usual course of the disease. In the experience of Dupuytren, it is stated to have been ascertained, that after having suffered from this inflammation, one person remained in perfect health for sixteen years, another for nine years, and a third for eight years. It would be surprising if a malady of this nature should not be sometimes complicated with permanent abdominal disease; but the complete and rapid recovery in most cases, even under unfavourable circumstances, should preclude the idea thrown out by some authorities that it is generally connected in its origin with mucous inflammation in the adjacent parts of the intestine.

The unfavourable terminations of this disease are suppuration and extension of the inflammation to the peritoneal lining of the abdomen, and even to the coats of the intestines, the latter termination being a supposition rendered sufficiently probable, but not yet confirmed by adequate evidence.

But even the termination by suppuration, as in the case of abscess of the pelvis after parturition, is for the most part unattended with serious consequences. To the pelvic inflammation after parturition, the disease under consideration has manifestly a considerable analogy. Yet active treatment in the early stage is plainly more essential than in the pelvic inflammation; for the tendency to suppuration seems to be exactly proportioned in this disease to the neglect of free evacuations of blood, even by venesection, on the first onset of the inflammation.

It seems certain that the pus formed in perityphlitic inflammation sometimes, though very rarely, penetrates through the abdominal wall; yet it is not to be inferred at once that every discharge of pus through an external aperture in this region arises from such an inflammation, since pus formed at a distance, or what is termed a congestive abscess, may be evacuated in this region. No case of this mode of evacuation, however, is reported in the two principal memoirs on this disease,—either in that by Husson and Dance, which contains eight cases, or in that by Menière, which contains thirteen cases.

In the cases which prove fatal, no evacuation of pus either by the rectum or by external opening for the most part takes place; but a

copious deposit of pus is found on dissection almost uniformly, I think, as far as the reported cases show, along with the marks of extension of the inflammation to the peritoneum.

The pathological seat of the affection which we have been considering seems beyond doubt to be in the cellular tissue between the fascia of the iliacus internus and the coats of the cœcum. And this peculiar seat explains why the pus, when produced, so uniformly passes into the cœcum itself. The iliac fascia, though somewhat variable in character, is for the most part a strong fibrous membrane. Its extent and connexions form, so long as it is free from disease, an impenetrable barrier to the progress of pus outwards. And when we remember that about one-third part of the circumference of the cœcum is uncovered by peritoneum, and that the uncovered part is in contact with loose cellular tissue interposed between the iliac fascia and itself, we shall no longer feel any difficulties in understanding the chief peculiarities of pericœcal inflammation. The pus is confined on every side by the close adherence of the peritoneum to the cavity which it lines. The alternative is, on the one hand, that pus so confined, almost in a sac, should penetrate through the posterior wall of the cœcum, which is but making its way through a thin partition to a mucous open cavity, or, on the other, that it should penetrate through the substance of the iliac fascia, or ascend into the right meso-colon by separating its laminæ, or, detaching the peritoneum from the iliac fascia, where it adheres close to it, should make its way into the pelvis. Cases may be instanced, I think, in which each of the consequences under the latter alternative has occurred, yet very rarely by comparison, and not probably till the inflammation unchecked had extended beyond its original seat and destroyed the substance of the fascia, or weakened the cohesion between the laminæ of the meso-colon, or that between the peritoneum and the subjacent substance, so that less resistance was offered to its progress between the laminæ of the meso-colon, and beneath the peritoneum in every direction, than through the coats of the cœcum.

Northern Journal of Medicine, July, 1844, *p.* 172.

29.—ON SOME CHRONIC DISEASES OF THE STOMACH.

By W. Strange, M.D., Surgeon to the Ashton-under-Lyne Dispensary.

The following are the principal varieties of disorder of the stomach which we generally meet with.

1*st.* Dilatation, torpor, or, to speak with more precision, atony of the stomach.

2*nd.* Atony with morbid irritability.

3*rd.* Acute irritation.

4*th.* Neuralgia, generally accompanied with pyrosis, to which the name of gastralgia might perhaps be more properly restricted.

5*th.* Chronic gastritis.

Each of the above varieties I have many times been able to distinguish as a distinct and separate attack, although two or more of them are often met with coexisting, and pyrosis is in some measure met with in all of them. Generally, however, the order of succession, where an individual presents several varieties at once, is atony, morbid irritation, or else neuralgia, and then chronic gastritis; the persistence of which last may reinduce any of the former varieties.

1*st. Atony of the stomach.*—This kind of gastric affection, so common amongst the crowded population of manufacturing towns, presents the following symptoms and physical signs:—The tongue is large, flat, and flabby, filling the whole width of the mouth, its surface almost uniformly pale and without scurf, presenting the appearance of boiled veal or muscular fibre which has been macerated in cold water; the face pale and flaccid, corresponding remarkably with the tongue; the epigastrium distended, not painful, but uneasy on pressure; the abdomen in women often pendulous and flabby, sometimes hard and tender; the pulse is generally unaffected, or it is weak and small.

Patients affected with this form of disease complain that they have no appetite, or that they crave for things which are to them indigestible. Immediately after even a light meal, they experience a feeling of distension which compels them to loosen their dress, and makes muscular exertion exceedingly distressing. There is not often any very acute pain in the region of the stomach or along any part of the digestive canal; but sometimes to the sense of fulness succeeds a constriction about the lower part of the epigastrium, accompanied by eructations of gas sometimes mixed with acidity. There is flatulence, with irregularity of the bowels, a general state of costiveness being occasionally interrupted by a painful diarrhœa. A feeling of constriction, with pain extending through to the back, coming on two or three hours after meals, may be owing, as is supposed by Dr. Abercrombie, to irritation created in the duodenum by the passage of insufficiently digested food into that bowel; and I have remarked that this pain very frequently coexists with a relaxed state of the bowels and painful motions. On the whole, however, a feeling of acute pain coming on periodically some hours after a meal is much more frequently met with in another well marked form of gastric disorder; viz., where the tongue exhibits a degree of redness round the edges, with furred centre; and where there is pain on pressing the epigastrium, denoting an irritable state of the mucous and muscular coats of the stomach.

With the view of reducing the irritation, if any, and of gently stimulating the stomach, I have for a length of time mainly depended upon one substance, viz. the oxide of bismuth, which has also been highly extolled by Dr. Paris and other authorities. When cases to which it is applicable are selected, I believe that not one in ten cases will occur in which much benefit will not be procured from its use. The manner in which I prescribe it is as follows:—

℞. Bismuth. trisnitrat. ℥j.; Morphiæ muriat. gr. ss.—j.; Acaciæ mucil. ℥ij.; Syrup. zingiber.; Tinct. cardam. com. ana, ℥iij.; Infus. cascarill. ℥v. M.

℥j. ter die.

This formula retains its appearance for a length of time; the mucilage suspending the bismuth in such a manner as to give to the mixture the consistence of cream. In pyrosis taken at the period of attack, and in that form a gastrodynia previously described, taken half an hour after meals, it immediately assuages the pain and promotes digestion. Whether the bismuth acts as an astringent, or as a tonic and stimulant, I know not; but in those cases particularly where there is considerable derangement of the duodenum, this medicine acts like a charm.

All kinds of fermented and spirituous liquors, as they debilitate as well as stimulate, are injurious in this affection. Purgatives must not be resorted to for the relief of the costiveness which so often accompanies this form of dyspepsia, as by over-exciting they afterwards debilitate the intestines. Gentle laxatives with tonics, such as small doses of aloes or colocynth with sulphate of iron, as recommended by Dr. Abercrombie, or with sulphate of zinc, are the most beneficial.

2nd. Atonic morbid irritability of the stomach.—Although, a simple state of deficiency in the vital power or tonic contractility of the coats of the stomach often exists alone and uncomplicated with any other derangement of the digestive apparatus, yet it appears that when that state has existed for some length of time, symptoms of morbid irritation set in, and either supersede or obscure the earlier symptoms. Consequently I look upon this second form of dyspepsia as the natural consequence of a long continuance of the former atonic variety.

The symptoms indicating this affection differ considerably from those characteristic of mere want of tone. The tongue is generally slightly red at the tip or round the edges; there is a thin whitish fur all over the centre which cannot be scraped off; a sense of heat in the throat, œsophagus, and sometimes in the stomach. The sleep is often disturbed, and muscular efforts are weakened. The appetite is always uncertain in this affection, following the remissions and exacerbations of the attacks. There is a general desire for savoury and solid food, although this almost invariably aggravates the symptoms. There is pain in the stomach during the whole time the food remains there, which is sometimes relieved by vomiting coming on from half an hour to three or four hours after a meal. Substances in small quantity are seldom returned. In some cases there is a sense of weight only at the stomach, until about two hours after taking food, when a sense of pain and constriction ensue, which lasts frequently until relieved by a relaxed but unsatisfactory motion. In these cases it has been no doubt rightly supposed that the irritable stomach pushes onwards the partially digested food into the duode-

num, whence it is either forced back by vomiting, or passes out of the bowels, after giving pain in its whole course, in a partially relaxed and often scalding motion. This morbid irritation of the stomach is sometimes accompanied by a degree of pyrosis, but not by any means in a constant manner. The regurgitations are more frequently composed of the mucus of the stomach mixed with acidity, gas, and the aroma of the food. We meet with pure cases of pyrosis, where a large quantity of a transparent water, called by the patients water-tornes, or in other instances of a glairy albuminous fluid, is pretty regularly ejected from the stomach after a paroxysm of severe neuralgic pain; more constantly in another form of gastric disorder, viz., that in which the pain is not so constantly excited by taking food into the stomach, but comes on in a periodical manner at certain hours of the day, or after an interval of one or two days, or a longer period.

The medical treatment of chronic morbid irritation of the stomach will depend very much upon the previous duration of the disease, its complication with other morbid conditions, and upon the general state of the patient's constitution. When the disorder has not arrived at any very troublesome height, a similar treatment to that recommended for atony of the stomach will be found to answer very well. In more exaggerated cases, however, and especially if there be much pain and heat at the epigastrium, it will be well to begin with moderate counter-irritation, as a blister, two or three mustard poultices, or the ung. antim. tart. All drastic purgatives, particularly mercurial ones, should be avoided, as they increase the irritation. The oxide of bismuth, with infusion of rhubarb and magnesia, will be found to answer the double purpose of maintaining a steady action upon the bowels, and of correcting the acidity and heat of the stomach.

The following is a good formula:

℞ Bismuth trisnitrat. ℥j.; Magnes. carb. ℥ss.; Tinct. hyoscyami ℥iij.; Infus. rhei ℥viii. M.

One ounce of this mixture to be taken three or four times a-day. After the more acute symptoms have been reduced, the mixture of bismuth with gentle stimulants and tonics, as prescribed for the atonic state, will answer well; and, finally, we may have recourse to quinine, iron, zinc, and other direct tonics.

Should there be much acidity with regurgitation some time after taking food, accompanied with a costive and unsatisfactory state of the bowels, the following pill taken regularly after the principal meal will be found very useful:

℞ Aloes in pulv. gr. iss.; Ferri sulph. gr. ij.; Sapon, dur. gr. vi. M.

Div. in pill. ij. simul sumend.

The soap is a great addition to the aloes and iron pill in common use, as it unites chemically with the free acid of the stomach.

Northern Journal of Med., July, 1844, *p.* 167.

30.—TREATMENT OF TAPEWORM.

By Dr. A. I. Wawruch, Vienna.

[This is, perhaps, as difficult a subject as the practical physician generally meets with, notwithstanding the apparent simplicity of the process required. Dr. Wawruch is a highly respectable physician of the Austrian school, and has particularly studied the effect of his treatment for twenty years. It consists of—1. The *preparatory*, or abstinent treatment. 2. The *curative* treatment. 3. The *after* treatment.]

1. In preparing the patient for the administration of remedies destructive to the worm, Dr. W. for three or four days previously withdraws all solid food, allowing a little mild soup several times in the day. In order to render the alimentary canal more susceptible to the coming treatment, the patient, during this period, takes the following solvent:—

℞ Radicis Cichorei et Taraxaci āā unciam unam coque in sufficiente quantitate aquæ per mediam horam; Colaturæ fortiter expressæ unciarum sex adde

Salis ammoniaci depurati scrupulum,
Syrupi Cichorei cum Rheo unciam semis.

Detur usui, signetur:—Two tablespoonfuls to be taken every two hours.

The object in the above prescription is to carry away by gentle means all impurities in the *primæ viæ*, at the same time that a more suitable predisposition is obtained for the next step. When, after a careful consideration of all the possible contra-indications, the time for proceeding becomes fixed, the patient, on the evening previous, must take a rich panado, made of bread-crumb, water, and several ounces of butter; and, at the same time, he must have, within the space of an hour or two, three or four enemata administered, constituted of linseed tea with equal parts of milk and oil. On the following morning, that of the appointed day, there must be a repetition of the same clysters and the same soup.

To this preliminary treatment, Dr. Wawruch attaches a very great importance; so much so, that he ventures to affirm that the success or non-success of the entire plan will often depend upon its strict observance; as the temporary withdrawal of the customary nutrition attacks the vitality of the parasite at once; for, according to an old saying of Alexander of Tralles, "hunger is the tapeworm's

mightiest foe." Abstinence from food ever aggravates the subjective symptoms, inducing a sort of desperation on the part of the intestinal lodger; and, after this has continued for some time, its rage for food becomes so considerable that whatever comes in its way is greedily consumed, even the medicament administered for its destruction. Another circumstance explaining the utility of the abstinent treatment consists in the fact that, in this way, the excitability of the alimentary canal becomes exalted, and, under the influence of the appropriate drug, its peristaltic action determines more powerfully downwards, expelling the entire contents of the intestines, inclusive of the worm rolled up. Failure in most cases is to be attributed, when it occurs, to insufficient preliminary fasting; and, indeed, in many of his own recorded cases, the cure was completed by this alone, the tænia being passed without a grain of medicine having been taken for the purpose. The employment of the mucilaginous and oily panado and enemata, whilst it enables the patient to endure the abstinence from other matters, has its use also in protecting him from being too powerfully influenced by the succeeding remedies, which otherwise might excite hyperemesis or hypercatharsis.

2. The measures for bringing about the expulsion of the tape-worm must begin early on the fourth day, just on the completion of the preparatory discipline before mentioned. The means themselves are of a twofold character, having for their object, first, to destroy the worm, and then to expel it from the body. For the first purpose, castor-oil and the male fern, are the remedies recommended; and, in the case of the former, it is of consequence that it should be recent, and have been expressed from the seeds including the husks, in which latter Dr. W. says the anthelmintic property seems to reside. He is accustomed to exhibit this medicine according to the following formula:—

℞ Olei Ricini Americani ex seminibus cum pelliculis recenter pressi uncias duas. Deter usui. Signetur:—Two tablespoonfuls to be taken every hour.

This he alternates with the powder of the male fern, as indicated below:—

℞ Pulveris radicis filicis maris drachmas tres. Divide in doses numero tres. Signetur:—One powder stirred up in tea to be taken every hour alternately with the oil.

These measures, we are informed, tend to the fulfilment of the first intention, that of effecting the destruction of the worm. The actual removal of the tænia, dead or alive, is aimed at by the exhibition of calomel in union with gamboge. Dr. W. never, but with the greatest reluctance, substitutes any other drastic, however similar in its operation, as none besides, in his own estimation, act so beneficially or so specifically. The dose is regulated according to

the particular diathesis of the patient; but, generally speaking, and on an average, the remedy is taken according to the following formula :—

℞ Calomelanos; Pulveris Gummi guttæ [Cambogiæ]; Sacchari Albi aa grana sex. Exacte terendo fiat pulvis. Dentur tales doses numero tres. Signetur :—A powder to be taken at one, three, and five in the afternoon.

To provide against any possible nausea or disgust at these remedies, the author is in the habit of being provided with some ounces of candied orange-peel to serve as a means of clearing the mouth by mastication, and also with some infusion of lime-tree flowers, to be drunk after the medicines have been taken. It is also advisable to have some emollient fluids in readiness, in cases of clysters or fomentations being required for any purpose.

These various means require the strictest regularity and order in their management; and the precise mode prescribed of administering the remedies must be conscientiously adhered to. In support of this injunction, Dr. Wawruch appeals to the recognised practical truth which demands that the physician, in employment of any specific mode of cure, should observe a rigorous punctuality, even in things apparently the most trifling. In particular, the succession of doses should receive the most careful attention; for, if these be given too precipitately, they will assuredly be rejected by vomiting, and the object be frustrated. If the intervals be too protracted, the patient becomes depressed and impatient, and, without purpose, suffers longer than he ought.

To resume, our author commences with the final treatment at eight a. m., by administering the first dose of castor-oil; at half-past eight a.m., the male fern is taken; at nine a.m. the second dose of castor-oil is received, and in half an hour the next powder of the filix mas. At ten a.m. the third and last dose of oil is given, and at half-past ten the last of the powders; in the hour next ensuing, one or two injections of milk and oil are administered. From this time till about one p.m., repose in every respect is conceded to the patient, in order that the medicines received should duly attain the intestinal surface, and be able to exert their influence upon the tape-worm itself.

At this period, nausea, headache, and griping most commonly set in, in such a manner that the patient will often conceive, from the intestinal commotion, that he can point out the precise location of the parasite. If vomiting now arise, the entire process is procrastinated, as in that case the whole of the third dose, or at least one half of the male fern powder must be repeated. If this interval, however, pass without the occurrence of any material accident, the practitioner must proceed to the administration of the gamboge and calomel, selecting, for fear of vomiting, the moment of greatest tranquillity on the part of the patient. It is well to let him have

some candied orange-peel just after the dose has been taken, as this often settles the medicine on the stomach. Time must be allowed before a second exhibition of the drastic; if nothing result for an hour or an hour and a half, the next dose may be given. Most commonly, however, if the medicine do not disagree, intestinal action will speedily take place after its administration; and the patient, with violent spasmodic action of the sphincter ani, expels the tapeworm. Of course, after this event, no further drugs are given, even though the head of the parasite be not discovered, as the cure is not the less certain on this account. Soon after the expulsion, all inconvenience to the patient ceases, who feels thoroughly refreshed, and as one regenerated.

The above description of treatment, with its results, is drawn from the more fortunate cases, a period of six hours at the most, being generally consumed in its progress. At times, however, the occurrence of fever, or of undue nervous excitement, during the preliminary abstinence, will necessitate the postponement of the ultimate remedies; at others, an indomitable vomiting has seemed to arise from the bulk of the male fern, which may equally frustrate the intention of the physician. Dr. Wawruch does not approve of the exhibition, in these cases, of the *filicin* as a substitute, according to the suggestion of the Baron von Jacquin, as, in three instances in which he had given this alkaloid, most severe and troublesome symptoms followed its use. The castor-oil also, and the drastic of gamboge and calomel, will occasionally so excite the stomach and bowels, as to render the practitioner's course both difficult and doubtful; and, here, acting upon general principles, he must be guided by judgment and discretion.

Another embarrassing circumstance consists in the expulsion of the worm not taking place somewhere about the customary period, since it creates a doubt whether the drastics should be withdrawn, or be continued to an unwonted degree. In these cases, the author's experience leads him to wait, and generally in a day or two, probably after the idea of cure has been given up, the wished-for result occurs without any medicine being given anew.

Whether an attempt, as here described, at the effective cure of tænia be successful or otherwise, the after-treatment must be decidedly such as shall tend to obviate the fear of intestinal inflammation, a state of things to be guarded against on account of the excitability induced by the previous proceedings. Dr. W., in this case, directs the treatment commonly recommended and employed in ordinary irritation of the gastro-intestinal mucous membrane. Some hours after the expulsion of the tapeworm, occasionally in a few minutes, a violent hunger sometimes arises, which must be carefully attended to, as the most prejudicial consequences have been seen to follow the indulgence at this period of the inclination. At times, however, no sense of inquietude, or irregularity of any kind, succeeds the treatment; in these cases, it is desirable not the

less to warn the patient to be careful respecting diet for at least a few days.

British and Foreign Medical Review, October, 1844, *p.* 328.

31.—*Hiccup treated by quinine.*—Among the many anomalous, and not unfrequently very obscure, results of miasmatic influence, are various affections of the digestive organs. Of these, hiccup is a most troublesome, and, occasionally, a very intractable one. In some cases, this gastric disorder has been observed to exhibit a distinctly intermittent character, and to be associated with the existence of other phenomena which are usually attributed to the operation of the the same morbific cause. M. Mendiere has recently published, in the pages of the Revue Medicale, several cases of this sort, in which the distressing symptom of hiccup was promptly and decisively cured by the free use of quinine, after it had resisted every other mode of treatment. He has used the same remedy with good results in many cases of severe cardialgia.

(The addition of a few drops of tinct. opii to the quinine will greatly enhance its efficiency in such cases. What an admirable remedy opium is in almost all the neuroses, provided the secretions are healthy at the time! The difficulty lies in knowing how to *time* its administration, and regulate its dose. We have usually found the liquor opii sedativus the best form in which to exhibit it: this may be given in a bitter infusion, to which ammonia may generally be added with advantage at the same time.)

Med. Chi. Rev., July, 1844, *p.* 221.

32.—*Vegetable acids in acidity of the stomach.*—Dr. Tracy, of Ohio, makes the following remarks on vegetable acids as correctives of acidity of the stomach:—My experience with the vegetable acids, as correctives of acidity, especially for the last two years, has been considerable. I have prescribed them in a large number of cases, and in nearly all with very decided benefit, some few of which may not be unworthy of a brief recital. During the summer of 1841, I was myself the subject of repeated and severe attacks of catarrhal inflammation of the eyelids, which uniformly yielded to the usual treatment in the course of from three to six days. I observed that they always succeeded to irregularities of diet and regimen, or to anxiety of mind, and were accompanied by acidity of stomach. This I attempted to correct by the early and free use of soda, but in vain; it had but a very slight and temporary effect. As these attacks became more and more frequent, I observed that they were preceded by a sense of fulness and oppression in the præcordia. I had for months abstained from the use of acids, under the impression that they were not suited to my state of health; but having received no benefit from soda, I was induced to take a glass of lemonade, at the first commencement of the attack, and almost instantly I experienced very copious eructations of gas, together with much alleviation of my feelings of

distress. The remedy was again and again repeated, and the threatened ophthalmic attack effectually prevented. I have since resorted to my bottle of lemon syrup, whenever threatened with a recurrence of the complaint, and uniformly with complete success; all the symptoms being removed in the course of a short time. I have from the time above mentioned to the present, (June, 1843,) made a free use of acids, and have not experienced a single recurrence of ophthalmia, and very few indeed of pyrosis.

I have found vegetable acids uniformly and entirely successful in removing the disposition to attacks of acidity of stomach, in persons who, during the intervals of such attacks, were free from all such symptoms; and my impression is, that in all *such cases* they can be relied upon with more confidence than any other remedy. In cases of acidity, arising from pregnancy, I have found the sub-acid fruits of great service, while those that were tart could not be borne, and mineral acids were decidedly injurious, and where alkalies or absorbents were of little or no avail.—*American Journal of the Medical Sciences.*

Prov. Med. Journal, July 24th, 1844, *p.* 258.

33.—ON ALBUMINURIA.

By George Ross, Esq., Camberwell.

[Mr. Ross relates a series of interesting cases of this disease, in which he attempts to shew the intimate connection which exists between the suppressed action of the skin, and the appearance of albumen in the urine. Mr. Ross remarks that the albumen in the the urine will be scanty, or even altogether absent, when the anasarca is trifling, and the skin in a freely perspiring state; but that when the skin is dry, and the anasarca mounts to the hips, the albumen will certainly appear, unless at the same time any one of the serous surfaces should commence a secretion of albuminous fluid, in which case the kidneys will be relieved.]

If also, says Mr. Ross, extensive anasarca should remain *in statu quo* for several days or weeks, the urine during this time would be found albuminous; but if, as before, fusion into a serous cavity should take place during the previous twenty-four hours, the urine would cease to render a coagulum, which would again appear upon an arrest of the functions of the secreting surface. Hence albuminuria did not alone depend upon the state of the kidneys as organically diseased, but also upon the state of the skin and serous surfaces.

Upon lately unfolding my views to a gentleman of considerable acuteness, he observed that in case I was right, the existence of ascites would, in a majority of cases, preclude the appearance of albumen in the urine. I saw the force of this remark,—it conveyed, in fact, the *experimentum crucis* of the doctrine, and I immediately reconsidered my cases.

To my gratification I found that my record of cases sustained my conclusion on this evidence also; for of 17 cases of albuminuria only 5 were ascitous; and even these 5 cases proved the rule on different grounds. These 17 cases were the only ones of albuminuria recorded among the aggregate 40 cases of dropsy. I must observe, however, that I have not recorded the examination of more than 24 cases in respect to the appearance of albumen in the urine, and 7 of these cases gave no evidence of albuminuria.

It is thus apparent that 12 out of 17 cases of albuminuria, were unaccompanied with ascites, and that, with trifling exceptions, *the degree of coagulation was proportionate to the extent of the anasarca.* In the 5 cases of extreme coagulation, excepting one of diabetes, the anasarca extended over the whole of the legs and thighs, and in two instances was attended with effusion into the scrotum: not so, however, in the milder cases. In one of the cases of "moderate coagulation," the anasarca was below the knee, and yet the urine coagulated; but I find a special note against this case, stating that there was a rash on the body, which, no doubt, influenced the character of the urine. In 5 cases of opacity there are 2 having anasarca below the hips wherein we should have expected a more abundant coagulation; but, on looking into the cases, I find that in one the anasarca, though diffuse, was slight, *with dyspnœa,* and that in the other there was ascites, and a freely-perspiring skin,—sufficient causes for the reduced amount of albumen. I must refer the reader to the bedside of the patient, where he will observe those nice discriminations which cannot be conveyed by the pen, and the perception of which constitutes the practical man.

The 5 cases of albuminuria with ascites now demand examination. In one of these cases the coagulation was extreme; but I find an interlineation in my note-book respecting the ascites,—"none at present,"—at the time the urine was examined; this case, therefore, proves the rule. In another case, where there was "moderate coagulation," there was also ascites; but in this case it is particularly noted that the skin was "dry, hot, and harsh." "When the abdomen was tapped a quantity of fluid, resembling milk and water, was drawn off, and contained *a trace* of albumen only." Here you have a dry skin, and a fluid secreted into the abdominal cavity very poor in albumen,—sufficient reasons for its presence in the urinary fluid. When this woman died her kidneys were found lobulated and mottled, exhibiting the first stage of Bright's disease. It would, therefore, seem that Bright's disease, in this instance, modified the secretion of albumen in the abdominal cavity by allowing it an easier exit by the kidneys. But it does not follow that the presence of albumen in the urine at all times indicates Bright's disease; indeed this position has been long abandoned. May not, however, granular degeneration of the kidneys materially alter, as in this case, the usual character of the effused fluid?

A third case of "mere opacity" was also attended with ascites; but this was a sequel of scarlatina, and when the urine was tested on

the following day, it betrayed even less albumen. The trifling quantity of albumen proves the position.

[Mr. Ross relates 4 cases of the disease, which seem to prove the correctness of some of his conclusions.]

It is true, continues he, that in nearly all these cases the albumen existed in the urine in *a very minute quantity*, but we must remember that *in each case there was effusion into one of the serous cavities*, by which *albuminuria, under ordinary circumstances, was prevented; and these cases, therefore, prove the general doctrine advanced.* The urine became albuminous only when the functions of the skin were suddenly suspended over a greater extent, in conformity with my general principle. These cases, therefore, are corroborative illustrations of the doctrine. When effusion into a serous cavity and into the cellular tissue takes place at the same time, the urine will be albuminous or not, in proportion to the quantity of effusion in either case. If the effusion into the abdomen or chest exceed in amount that into the cellular tissue, then the albuminuria will decrease, and *vice versâ*. The practical deduction is evident.

It was the observation of these and of other similar cases that first awoke in my mind a perception of the true nature of albuminuria. I conceived that a specific disease, like granular degeneration of the kidneys, should be attended with specific symptoms; but when I found the albuminuria varying in amount, and even appearing and disappearing at various times, I was led to consider the disturbing causes, and observed a distinct relation between serous effusion and albuminuria. Further inquiry traced the differential amounts of albuminuria to the relative suppression of the functions of the skin, and this connection was so general and palpable that I could not hesitate to form the opinions I have advanced.

It will have been observed that of the seven cases where no albuminuria existed, five were cases of serous effusion, thus corroborative of the doctrine; one was a case of anasarca of the body and legs, the patient had been taking elaterium, and it is probable that the albumen was thus carried off, because when this same patient was under treatment at a previous time, with a less amount of anasarca, there was albuminous urine; another was a case of inflammatory dropsy, with a note of interrogation, and therefore yields no conclusive evidence.

If it were necessary I could record several cases where albuminuria existed in a considerable degree, to prove that this symptom gradually disappeared as the cellular tissue was unloaded; but it is better to send the reader to the bedside to observe for himself.

Before I conclude I must, however, state what I conceive to be the most important and specific function of the skin as a glandular organ. The secretion of the perspiratory fluid composed of salts and aqueous particles, is by no means the distinctive office of the skin, although, when this organ is talked of, no one ever considers it as

endowed with any other functions. The skin is a *specific excretory gland*, and equally as important as the kidneys. The specific substance which it secretes is albumen, in the form of the cuticular envelope, hair, nails, &c. The secretion of albumen in this form is, under certain circumstances, extremely rapid and considerable, and in many cases dropsy, attended with cachexia, constitutes a prominent symptom. The amount of the perspiratory fluid merely renders a criterion of the activity of the secretion of albumen, although this relation is by no means constant. As a rule, in dropsy, when the cuticle peels, and the hair falls off, there will be no albuminuria, but the urine will be high coloured and throw down a sediment of inorganic salts.

It is manifest that if this secretion of albumen be interrupted, the kidneys will be required to eliminate it, and they will do so with the more facility in proportion as they have undergone the state of granular degeneration. When the kidneys, from being thus diseased, carry off the retained albumen, there is, in a ratio to their activity, a prevention of effusion into the internal serous cavities, the cases exemplifying this position. The disease of the kidneys is thus the better of two evils, and becomes a means of prolonging life.

Lancet, Aug. 3, 1844, *p.* 576.

[The recent experiments of Dr. Fourcault, referred to in our 1st Article, seem in some measure to corroborate the conclusions of Mr. Ross. In his paper read before the French Academy] he attempted to show the influence of impermeable varnishes applied on the skin, or on the surface which it covers, in the production of the disease known under the name of albuminuria, or Bright's disease. His experiments had been instituted with a view to arrive at a knowledge of the functions of the skin. The conclusions at which he arrives are the following :—

First. The skin is only an organ of secretion, and the products of transpiration are not found in its tissue.

Second. An animal preserves its temperature, even if its skin is taken off. Albuminuria does not follow this operation.

Third. When cutaneous perspiration is entirely suppressed five series of phenomena manifest themselves. A, deep alteration of the blood ; B, considerable fall in temperature ; C, super-secretions and effusions of various kinds ; D, local lesions ; E, alteration in the composition of the urine ; and, lastly, albuminuria.

Fourth. The same phenomena, more especially the last, manifest themselves, when, after taking off entirely or partially the skin of an animal, the varnishes are applied on the surface which it covers.

Fifth. Cutaneous asphyxia is the result of complete suspension of perspiration. It may occasion the death of man as well as that of the inferior animals. Owing to its suppression the blood acquires to a maximum degree the refrigerant and stupefying properties of venous blood.

Sixth. When the suppression is partial or incomplete it occasions the general phenomena which are observed in fevers and in inflammations.

Lancet, June 8, 1844, *p.* 339.

[Dr. Lever has remarked that in nine out of ten cases of puerperal convulsions occurring in puerperal cases, it is remarkable that albuminous urine existed.]

Having met with a case of convulsions where, from the previous existence of anasarcous symptoms, it was regarded as pregnancy complicated with granular disease of the kidney, but where the woman recovered, and all traces of albumen in the urine disappeared, Dr. Lever was led "to suppose that the albuminous condition of the urine depended upon some transient cause, probably connected with the state of gestation itself." He therefore carefully examined the urine in all the cases of puerperal convulsions that subsequently occurred in the Lying-in Charity and in private practice, and found it albuminous at the time of the convulsion *in every case but one*, in which inflammation of the membranes of the brain with considerable effusion was found after death. He further tested the urine drawn off by the catheter during labour, and with precautions to prevent the admixture of vaginal secretion, in more than fifty women, and the result was, "that in *no* case was albumen detected except where there had been convulsions, or their recognized premonitory symptoms. Urea was sought for in the blood in one instance, but not detected." Dr. Lever's experience leads him to the conclusion, that "cases of convulsions complicated with an albuminous condition of the urine are divisable into two forms: in the one the urine is *albuminous during pregnancy*, of which there are external evidences, as œdema of the face, eyelids, hands, &c. In such cases the convulsions will be more violent, will last for a long time after delivery, and the urine will long retain its albuminous properties. In the second variety the urine becomes *albuminous during labour*. The albumen is less abundant, and speedily disappears after delivery. The fits are less violent, and seldom reappear after the labour has been completed, but if they do it is in a milder form, unless complicated with lesion of the brain.

Dr. Lever considers that Mr. Robinson, in his "Inquiry into the Nature and Pathology of Granular Disease of the Kidney, and its Mode of Action in producing Albuminous Urine," has satisfactorily proved that causes which induce congestion of the kidney by preventing or obstructing the return of blood through its veins, as abdominal tumours, &c., will produce renal congestion, and is of opinion that the gravid condition of the uterus by its pressure prevents the return of the blood through the emulgent veins, causes renal congestion, and the consequent albuminous condition of the urine. This congestion may take place towards the close of pregnancy, or it may not be excited, and the albuminous urine present, till the onset and progress of labour. He further remarks, that great similitude exists

in the appearances presented by females attacked with eclampsia, and those observed in persons affected with albuminuria. In neither case do the convulsions strictly deserve the term "epileptic." Epilepsy is a chronic disease, while puerperal convulsions, and the convulsions which attend the morbus Brightii, are of a clonic character.

The treatment advised by Dr. Lever in the sthenic form consists of active depletion, the prompt and regular exhibition of tartarized antimony and purgatives, because, he remarks, "it is no unusual thing to find large scybala evacuated, even though the bowels may have been daily relieved." Mercury requires great caution, as the system is very readily affected in puerperal convulsions attended with albuminous urine, and when its specific effects are produced, the diarrhœa, ptyalism, and consequent debility, are extremely distressing, as well as difficult to remedy.

He deprecates artificial dilatation of the os uteri (which may induce a convulsion); is no advocate for rupturing the membranes and inducing premature labour; and is altogether opposed to incisions in the vaginal portion of the os uteri, as recommended by Velpeau, but strongly advises delivery as soon as the state of the parts through which the child has to pass will permit. If the membranes are unbroken, the os uteri soft and dilatable, and the external parts lax and moist, version may be performed, but unless circumstances call for immediate delivery he would rather wait till the head can be seized by the forceps or vectis.

Med. Gazette, May 17, 1844, *p.* 216.

[A case of this disease under Dr. Williams is reported by Dr. Fearnside. It occurred in University College Hospital, and is a good illustration of some of the prominent symptoms of this too much neglected disease. The two things chiefly to be noticed as predisposing this man to the affection, were intemperance and exposure to cold and wet, causes which are very likely at any time to produce this disease. His health did not seem to be particularly affected till within the last week or two. He awoke in the morning with a swollen face, followed soon afterwards by swollen legs. His breathing became difficult with a sense of weight and oppression about the chest, urine high coloured but not bloody, no pain in the loins.]

Present State.—The surface generally is cool and dry; the legs and thighs are tense, and very œdematous; the integuments of the abdomen and walls of the chest are also œdematous, but the arms are not affected. The face generally, and its left side in particular, are swollen and puffy, and the impression of the finger does not immediately disappear; but there is no distinct "pitting" upon pressure; the swollen parts are not in any degree painful. The ocular conjunctiva, especially that of the left eye, is considerably ecchymosed. The skin of the lower extremities is marked by a great number of discoloured spots from bruises, and there are also many small reddish

pimples, some of which are covered with blackish scales, as if from a drop of concreted blood.

He complains of a sense of heaviness, and some pain about the head; he has a disposition to sleep more than usual; the countenance has a heavy expression.

His voice is rather hoarse; he coughs frequently, but has no pain about the chest; he complains, however, of a sense of fulness; he expectorates a considerable quantity of a thin brownish fluid, with portions of mucopurulent matter floating in it.

Treatment.—Soon after his admission, a dose of calomel was given, and followed by a draught of infusion of senna; twelve ounces of blood were taken from the arm: the patient was directed to take an ounce of the bitartrate of potash every morning, and he was placed upon middle diet. On examination by Dr. Garrod, urea was found to be present in the blood—a quarter of a grain of the nitrate being contained in one ounce of serum: 1000 parts of urine were also found to contain 4.8 parts of albumen. For some time the cough continued to be the most troublesome symptom, but its violence and frequency were much reduced by the abstraction of 13 oz. of blood from the interscapular space by means of cupping. The urine remained scanty for some days, the quantity voided daily averaging, as nearly as could be ascertained, about thirty ounces; but after he had been five or six days in the hospital, it became more abundant, amounting to about three pints in the twenty-four hours; it lost its impregnation with the colouring matter of the blood; its specific gravity fell, ranging between 1014 and 1018, and the quantity of albumen present in it diminished to a greater extent than was accounted for by the increased quantity of fluid excreted. The bowels were freely acted upon by the bitartrate of potash, which at first only occasioned some slight sickness. The œdema gradually, but rather slowly, diminished; the countenance became less heavy and soporose, and the patient experienced less disposition to sleep than on his admission.

The nature of the disease in this case was apparent from a very slight examination of the patient. The puffiness of the face, the extent of the œdema, the suddenness of its appearance, the fact that the face was the part which first began to swell, the habits of the patient, his habitual indulgence in very free potations of intoxicating liquors—all these positive circumstances being confirmed by the absence of any evidence of disease of the heart, gave a very high probability to the opinion that the dropsy depended upon disordered function of the kidneys, and the non-elimination of urea from the blood. This supposition was established by a chemical analysis of the blood and urine; the former was found to contain urea, and the latter albumen. The disease under which the patient was suffering was the *acute* form of albuminuria; the symptoms which ushered in the attack, the thirst, heat of skin, headache, &c., were such as announce the commencement of an acute disease. The character of the urine was another proof of the same fact; it was

scanty, high coloured, from the presence of hæmatosin, of by no means low specific gravity, and largely impregnated with albumen. The swelling of the face, although more considerable, perhaps, than is generally seen in œdema of this part from albuminuria, was, no doubt, owing to the same cause as the œdema of other parts of the body ; for there was an absence of any local disease to explain it ; it was not attended with the usual signs of inflammation, and it had that peculiar *elastic* character, not distinctly pitting upon pressure, which has been noticed, and is adverted to by Dr. Christison, as connected with that pathological condition of the kidneys of which the general œdema is a consequence. The heaviness of the countenance, and the great disposition to sleep manifested by the patient on his first entering the hospital, must be attributed to the same cause as the œdema, the circulation of urea in the blood being a slight degree of the same state which, in its more developed form, is seen as coma, or apoplexy.

The bronchitis from which the patient was suffering, if not dependent upon the vitiated character of the blood, was probably, at any rate, influenced and maintained by it. It appears rational to suppose that blood containing an excrementitious matter must more or less irritate, and otherwise modify, the functions of different parts, and thus render them more susceptible to impressions from external causes.

The *origin* of the disease in this case may fairly be attributed to the patient's habits and mode of life ; his large consumption of fermented and spirituous liquors, and his almost constant exposure to cold and wet. From the operation of the former causes, the secreting powers of the kidneys are habitually taxed to get rid of the superfluous amount of fluid daily thrown into the circulating system ; a fluid not consisting of simple water, but holding in solution or admixture various innutritious and noxious matters, which cannot fail to make some impression (no doubt, of an injurious character) on the secreting apparatus of the emunctory by which they are discharged ; and which being repeated, must either directly lead to the production of disease, or produce a state highly favourable to its development, on the application of other exciting causes. Again, one of the most powerful and constant effects of cold is the production of internal congestion, and in this the kidneys share ; their secreting power, however, has already been taxed to the utmost,—their vital properties more or less impaired, and they are ill adapted to bear the extra quantities of blood thrown upon them. Under these circumstances, it would appear that the most exposed and unprotected vessels, those of the corpora Malpighiana, sometimes give way, and allow blood to be discharged with the urine ; or if this is not the case, the serum of the blood transudes, and mingles with the fluid. Moreover, the true secretory functions of the kidneys—those consisting in the production and bursting of the cells along the parietes of the ducts—are also interfered with ; hence the amount of solid matter discharged by the urine is lessened, and even some of

the excrementitious materials which exist ready formed in the blood are not eliminated ; and hence various injurious results ensue, some of which have been already enumerated as occurring in the present instance. The state of the kidneys, therefore, in the early stage of this disease, appears to be simply one of congestion in at any rate the majority of cases : theoretical reasoning would lead to this conclusion, and morbid anatomy confirms it. Many of the symptoms present in the progress of the case would not be easily accounted for on the supposition that the essential part of the disease is an inflammation of one or both kidneys ; the cool skin, slow pulse, and absence of any pain or tenderness about the loins, are symptoms which we should not expect in inflammation of so important an organ.

The *treatment* in this case consisted in bleeding, to diminish the morbid mass of blood, and also to reduce any tendency to secondary inflammations ; hydragogue purgatives were then administered, which are useful by lessening the quantity of the circulating fluid, deriving to the intestines, lessening renal congestion, and thus enabling the kidneys to return to their healthy action. On June 24th the patient was cupped between the shoulders to relieve the bronchitic symptoms, and a few days afterwards Dover's powder was prescribed, so as to determine freely to the surface. Had the patient remained under treatment longer, a diuretic would probably have been of use ; for although remedies of this class are condemned by some physicians, on the ground that they add to the irritation in the kidneys, the restriction cannot be held binding except during the presence of acute symptoms, or while the disease is in an early stage. In therapeutics it is frequently observed that a stimulant is one of the best applications to congested parts ; illustrations of this in the treatment of the diseases of the external parts of the body are numerous, and the analogy may fairly be extended to internal organs.

Med. Gazette, July 26, 1844, *p.* 545.

31.—TREATMENT OF DROPSY WITH CROTON OIL.

By George Fife, M.D., Physician to the Sunderland Infirmary.

[In some cases of this affection, published by Dr. Fife, he found the croton oil much more useful than elaterium. The first case was a young woman 25 years of age, who had suffered from ascites between five and six years, and for which paracentesis had been frequently performed. She underwent the usual treatment, including elaterium, which was pushed to the utmost justifiable extent, without diminishing her size, which was ten feet in circumference at the umbilicus. Croton oil was now given at the suggestion of Mr. Handley, of Howden.]

The croton oil was commenced with in doses of three minims every night at bed-time, and had been taken a very few days when the tumour sensibly subsided, and became soft, instead of being, as

formerly as tense as a drum. The remedy was steadily and uninterruptedly given for at least ten or eleven weeks, and the swelling very rapidly diminished; pressure being at the same time made by means of a very broad bandage, which was constantly kept applied, its tightness being increased as the enlargement required. One remarkable fact connected with the continued employment of so harsh and drastic a purgative, is, that it never, even when operating most powerfully, gave rise to any unpleasant symptom; but on the contrary, the patient daily improved both in health and appearance. The only complaint she ever made was of languor occasionally, when its action had been more severe than it generally was. In short, at no time was there either hypercatharsis or any dysenteric symptom present. As the quantity of fluid lessened, a tumour in the right iliac region became very distinct—evidently ovarian, and quite moveable—in size equal to the mature fœtal head. On the left side there is also enlargement of the ovarium, though to a much smaller size.

The medicine has now been discontinued for many months, and no increase of fluid has ensued; the only medicine resorted to or required being gentle aperients, and this only to an extent infinitely less than requisite to many healthy persons. Her greatest circumference in the same situation as above-mentioned, and at a lower point where the projection is now greater, is no more than three feet. The diminution of size is therefore not less than seven feet.

The next case was that of Bartholomew Queeny, aged 40, a patient at the dispensary. When admitted he laboured under ascites and anasarca, evidently depending on heart disease, which latter was found complicated with organic disease of the lungs, and which, had he lived, I have no doubt would have terminated in phthisis. In consequence of the dyspnœa being urgent, and the abdominal effusion manifestly on the increase, I resolved on giving him also the croton oil, which he took for some time with the greatest possible relief, and the most decided reduction of both the ascites and anasarca. In fact, for a time, the improvement was so great as to lead me to hope that a state of comparative health might be secured. His chest symptoms however became worse, and he sunk exhausted, not however by the means employed, as they had for some time been discontinued, in consequence of the dropsical symptoms being so much ameliorated.

The third case in which the same treatment was employed, and with equal benefit, was that of George Lumley, aged 20, a gentleman's servant. When admitted into the infirmary, he was suffering from ascites, very great œdema of the whole lower extremities, and great derangement of the function of the liver, which symptoms, taken in connection with the previous history of the case, led me to consider it as one of dropsy depending on organic disease of the liver and mesenteric glands. Being of a very delicate fibre, the croton oil was given with more care than in either of the previous cases, being omitted for a few nights occasionally. In about ten days after its first administration, the reduction on measurement was found to be

seven inches, and a corresponding diminution in the size of the limbs had also occurred. The true nature of the case became more evident than ever, as the liver could be felt distinctly to be enlarged, and the abdominal swelling presented the hard irregular sensation met with in those cases, where we have not only the enlarged mesenteric glands, but where, by that subacute inflammation, so common a complication, the whole abdominal contents become as it were one mass, being firmly agglutinated together. The sense of fluctuation quite disappeared, and the biliary secretion, through the use of mild mercurials, became much improved.

In consequence of his being comparatively well, he left the hospital, and went home to Northallerton to his friends, where he continued better for some time, but has since died. In this case also his general health sensibly improved, even when taking croton oil. The particulars of the cause of death in this case have not reached me, but there can be very little doubt of its termination being by exhaustion and hectic, as extensive mesenteric disease was but too unquestionably present, and further, he had lost a brother under very similar circumstances.

In conclusion, it may be briefly remarked that the croton oil possesses one very decided advantage over elaterium, viz., that even when its extreme action is manifested, it is not followed by the depression inseparable from the effective action of the latter, but that where the greatest "vis inertiæ" has prevailed, accompanied by absolute incapacity for exertion, a sensible amelioration in these respects has followed its continued employment. In proof of this, it may be mentioned that in a case at present under its influence, where the slightest exercise was productive of extreme fatigue and languor, the patient can now walk three, four, and five miles in the day without suffering serious inconvenience.

Prov. Med. Journal, Sept. 25, 1844, *p.* 397.

35.—*Peritoneal Dropsy Treated by Arsenic.* By Dr. Debavay.—A woman, 38 years of age, and the mother of three children, applied to Dr. Debavay on account of abdominal dropsy which had persisted for fifteen months. After her last confinement she had been attacked with puerperal peritonitis, from which she imperfectly recovered. Shortly after this the abdomen began to enlarge, for which she was subjected to various kinds of treatment, from which she only experienced temporary relief. The abdomen was tense, hard, and with a distinct sense of fluctuation. None of the abdominal organs, however, appeared to be affected. Her general health and appetite were good. From the known beneficial effects of arsenic in other diseases, Dr. Debavay resolved to try its action in this case. He commenced by administering one pill morning and evening, containing the twentieth part of a grain of arsenic. For the first few days no sensible effects followed this dose; but soon

slight colic pains and diarrhœa followed, and so increased, when three pills were given daily, that the medicine was obliged to be suspended. When again resumed, only one or two pills were taken in the course of the day. At the end of six weeks the abdomen was less tense, and notably diminished in size, at the same time the urine was more limpid and increased in quantity. The skin, too, which was before dry, became soft and moist. The arsenic was continued at intervals for six months, by which time all symptoms of dropsy had ceased; the catamenia, which had been suppressed, had returned, and she enjoyed perfect health.

Edinburgh Med. and Surg. Journal, July, 1844, *p.* 256.

36.—*Treatment of Uric Acid Gravel by Phosphate of Soda.*—In an interesting paper of Dr. Golding Bird, "On Professor Liebig's Views of the Composition of Urine," he says:—One important practical hint may be drawn from these observations; viz., the probably successful treatment of uric acid gravel by the administration of phosphate of soda. If sufficiently diluted, this salt is sure to enter the circulation and be excreted by the kidneys, thus furnishing to the urine an energetic solvent of uric acid. It is true that this indication can be generally fulfilled by the pure alkalies and their carbonates, but they too often exert the injurious effect of materially interfering with the digestive organs, and thus directly affecting the integrity of those functions most intimately connected with the production of the morbid deposit. The phosphate of soda may be given in doses of ℈j. to ℥ss. thrice a day without any other apparent effect except that of slightly relaxing the bowels, and the urine becomes charged with the salt. We may thus hope to retain uric acid in solution, and gain time for the employment of those remedies which are best adapted for the treatment of the uric diathesis. For it must never be forgotten that in merely giving a remedy to hold a urinary deposit dissolved, we are merely treating an effect, and not a cause.

Medical Gazette, August 23, 1844, *p.* 689.

37.—*Incontinence of Urine in Children.*—[Mr. Maclure draws our attention to a very useful remark made by the late Sir Charles Bell respecting this troublesome affection in children. Most practitioners have met with difficulty in curing the irritable state of the bladder during sleep, to which some children are subject.]

This occurrence, says he, viz., that of passing urine in bed, never takes place but when the boy is asleep upon his back; and the cure is a simple one: he is to accustom himself to sleep upon his face or side; the urine is not passed, nor is he excited to dream of making urine while he keeps this position.

The circumstance is unaccountable, until we reflect on the position of this master-spring of the muscles of the bladder; the sensible spot a little behind and below the orifice of the bladder. When a

person lies upon his belly, the urine gravitates towards the fundus; but when he lies on his back, it presses upon this sensible spot, and distends that part of the bladder which is towards the rectum, &c.

Lancet, Oct. 12, 1844, *p.* 77.

38.—*Incontinence of Urine.*—M. Chabrely recommends the use of the balsams in this troublesome affection. Here are a couple of his prescriptions:—

℞ Styrax Balsam, 6 grammes; Peruvian Balsam, 6 grammes; Honey, 90 grammes; Powder of Gum Arabic q. s. to make an electuary, of which a tea-spoonful is to be taken night and morning.

℞ Styrax Balsam, 6 grammes; Balsam of Tolu, 8 grammes. M. and divide into pills of 30 centigrammes (5 grains), which are to be silvered over and rolled in lycipodium powder. From four to eight of the pills to be taken daily.

The patient is at the same time to make use of tar water by way of tisan.

Medical Gazette, June 28, 1844, *p.* 448.

39.—*Hippuric Acid, a Constant Constituent of Normal Human Urine.*—Experiments made in the laboratory at Giessen upon the urine of numerous individuals, during six months, have proved this important fact. Urine is evaporated by the water-bath to the consistence of syrup, and 1-20th of strong hydrochloric acid added. The mixture is then shaken with ether, which dissolves the hippuric acid. If the ethereal solution should not readily separate a few drops of alcohol effects the separation. In such case the decanted fluid must be agitated with water to remove the urea taken up by the alcohol. The ethereal solution yields crystals of hippuric acid upon evaporation. When urine becomes stale, it is found to contain benzoic acid instead of hippuric acid. Prout long ago found benzoic acid in stale urine, but if this is evaporated without the addition of potash most of the benzoic acid escapes in vapour.

Hippuric acid was originally discovered by Liebig, in the fresh urine of herbivorous animals, and its conversion into benzoic acid, as the urine became stale, observed. Dr. Prout suggested that hippuric acid might exist in the urine of infants, but he did not detect it. Ure showed that when benzoic acid is taken into the stomach it shows itself as hippuric acid in the urine.

The formula of hippuric acid is C_{18} NH O_6 + aq.

That of benzoic acid is ..... C_{14} H_5 O_3 + aq.

which shows the relation between these acids, and explains these transformations.

Lancet, May 11, 1844, *p.* 226.

40.—*Nitrate of Urea as a Diuretic.*—[In two cases reported by Mr. Kingdon, of Musselburgh, he found that nitrate of urea acted as a very powerful diuretic, and reduced, in a comparatively short time, anasarcous swellings of some standing, when the ordinary diuretics had failed. In the first case he gave one grain of the nitrate of urea with one grain of calomel, in the form of pill, every night and morning for twelve days, when the urine had been so copious for some days that the swelling disappeared. In the second case the urea was given alone, one grain and a half of the nitrate three times a day. The same success attended this treatment; as in ten days the anasarca disappeared.]

Lancet, September 7, 1844, *p.* 729.

41.—ON THE VALUE OF THE CHEMICAL TESTS OF DIABETIC URINE.

By W. T. Gairdner, Esq., Edinburgh.

[In Retrospect Vol. 9, article 5, we give a paper of Dr. Golding Bird "On the respective value of the tests for diabetic urine," in which he seems to place the greatest reliance for accuracy and convenience on "Trommer's copper test." This test is described as follows:—"Add to the suspected urine, contained in a large test tube, a few drops of a solution of sulphate of copper; a very inconsiderable troubling generally results, probably from the deposition of a little phosphate of copper. Sufficient *liquor potassæ* should then be added to render the whole strongly alkaline; a greyish-green precipitate of hydrated oxide falls, which if sugar be present, wholly or partially re-dissolves in an excess of the solution of potash, forming a blue liquid, not unlike the blue ammoniuret of copper. On gently heating the mixture nearly to ebullition, the copper falls in the state of suboxide, forming a red and copious precipitate. *If sugar is not present, the copper is deposited in the form of black oxide.*" On this test Mr. Gairdner makes the following observations.]

In repeating this test with various healthy urines, and also with diabetic urine, my suspicions as to its accuracy were awakened by finding that in two specimens of perfectly healthy urine, a precipitate was obtained by Trommer's process, which in colour and appearance was entirely different from the black oxide of copper. The precipitates in question were in rather smaller quantity than usual, flocculent, and of a light orange colour, and were surrounded by a fluid deeply tinged with orange. On adding sugar to a portion of one of these urines, and subjecting it again to the test, the precipitate which resulted differed in no perceptible degree from the former. The precipitate in the diabetic urine on which I operated, (which was very strongly saccharine,) differed from these in being much more abundant, and somewhat brighter in hue; but the colour was essentially the same in both, viz. deep yellowish orange. I have

since obtained the same result as above from various other healthy urines, indeed it seems to be by no means uncommon.

The fallacious nature of the test, which appears to be clearly indicated by these observations, receives, moreover, additional evidence, and perhaps in part explanation, from the following circumstances.

1. The phenomena on which Trommer's test is founded may be observed by performing it on pure water, and on a solution of sugar. If to pure water in a test tube, barely tinged with a few drops of solution of sulphate of copper, potassa be added drop by drop, the first effect is a greenish blue precipitate, which on the addition of more potassa begins to be redissolved, communicating a blue colour to the solution. Before the liquid has become entirely clear, a second precipitate begins to be thrown down of an indefinite grey-green colour, and much smaller in quantity than the first; and if the addition of potassa be stopped at this stage, and heat applied, a green precipitate first appears, and on boiling, the black oxide is thrown down in considerable quantity. On the subsidence of the precipitate, the surrounding fluid is left colourless and transparent. If sugar be present in the water operated on, the first precipitate of the potassa is completely redissolved by excess, without the deposition of any second precipitate; and on boiling the transparent blue solution which thus results, no change takes place at first; but by continuing the boiling for some minutes, the red protoxide is deposited at first in minute quantities on the sides of the tube; the greater part of the liquid, however, *remains unchanged*. This experiment may be taken as showing the test of sugar in the simplest possible form, uninfluenced by anything which might disturb its action. But it is remarkable that the changes in diabetic urine on the application of the test, proceed in a different manner, and end in a different result, from those described above as taking place in the solution of sugar. In this case, on heating the blue solution, (the preliminary steps having been gone through), it changes colour rapidly and suddenly to orange; and instead of the precipitation of a minute quantity of protoxide after some minutes' boiling, from a liquid for the most part unaltered in colour, there is immediately a large orange-coloured precipitate deposited, of a different appearance from the protoxide, and much less prone to subside. The changes which I have described as sometimes occurring in healthy urine take place in a way very similiar to this. These circumstances appear to show that it is not the sugar alone which is concerned in the changes in diabetic urine. The following observation proves this yet more strongly.

2. The tendency of sulphate of copper to form peculiar compounds with organic principles of all kinds, and the extremely various results when such compounds are submitted to Trommer's process, is another circumstance which tends to induce a suspicion of the fallacious character of this test. Thus a dilute solution of albumen (white of egg) gives a dark brown precipitate when treated by

Trommer's process; a single drop or two of tincture of galls gives a red or purple precipitate in a brownish liquid; and a greatly diluted portion of skimmed milk, gives a gold-coloured precipitate in a bright green liquid. I mention these not as having individually any peculiar relation to the present subject; but because when taken together they show the strong tendency to the formation of peculiar precipitates by Trommer's process, when there is any organic matter present. One of these combinations, however, is worthy of particular notice; it is that with uric acid. The compound of this substance with copper may be procured by boiling a little uric acid in a dilute solution of sulphate of copper; the blue colour disappears from the fluid, and the compound is precipitated. If now, a little of this compound be acted on by potassa, or better, if a little uric acid diffused in water be subjected to Trommer's test, as before directed, a peculiar precipitate will be obtained on heating, differing in different cases according to the quantity of uric acid, and probably also according to some unascertained circumstances. It is sometimes nearly white, sometimes more or less of a yellow colour; and in more than one instance I have procured a precipitate of precisely the same appearance as that which I had formerly obtained from diabetic urine.

I am not aware whether this is the only substance found in urine which alters the results of this test; but I have been informed by a friend that urea does not affect it in the slightest degree. However, when this observation regarding uric acid is connected with what has been said above, I think it will appear probable, that the precipitate thrown down from diabetic urine by Trommer's test is not uncombined protoxide of copper, but that both in this case and frequently in healthy urine, that precipitate is the result of a combination of the oxides of copper with various animal matters which occur in the urine. At all events it is pretty clear from the experiments which I have described, that this precipitate cannot by any means be relied on as a test of sugar in urine.

Lond. and Ed. M. J. of M. S., July, 1844, *p.* 565.

42.—FURTHER REMARKS ON THE TREATMENT OF ACUTE RHEUMATISM, BY LARGE DOSES OF NITRATE OF POTASS AND SULPHATE OF QUININE.

By Henry Bennet, M.D., formerly House Physician to the Hospital of St. Louis, &c, Paris.

[In Vol. 9, article 6, we published the remarks of Dr. H. Bennet on this subject, but as the following paper gives us his views on this subject more in detail, we think it well again to place them in our pages. Dr. Bennet says]

The cases in which I have found the nitrate of potass to be the most successful are those of acute rheumatic fever; in chronic rheumatism it appears to be but of little avail. M. Gendrin gene-

rally begins by four drachms in the twenty-four hours, with an adult female, and six drachms with an adult male, and rapidly increases the dose to eight, ten, or twelve drachms, seldom carrying it further. This is also the practice which I have followed. The nitre must be given dissolved in a large quantity of weak lemonade, or barley-water, properly sweetened, in the proportion of about four drachms of nitre to a pint and a half of gruel. This solution should be the only beverage, in order to ensure its being drunk by the patient. In the great majority of cases, when thus administered, it is from the first tolerated. Sometimes, however, the ingestion of the solution at first occasions slight vomiting, but this I have always observed soon to give way on merely continuing its use. M. Martin Solon states that in these cases he has found that the addition of a little syrup of poppies effectually arrests the vomiting. During the first twenty-four or thirty-six hours, very little change is produced in the state of the patient, but, generally speaking, about that time, sometimes a little later, the pulse diminishes in strength and in number, and that without any perceptible change in the state of the patient. M. Martin Solon says that the quantity of the urine is seldom if ever increased, but in this I believe he is wrong, for I have certainly seen many cases in which the renal secretion has been decidedly increased. Sometimes the excretions of the skin are also much increased, abundant diaphoresis setting in on the second or third day, and lasting for a day or two. When this occurs I have remarked that the pulse falls much more rapidly than when the depressing effect of the salt alone is experienced. M. Martin Solon does not think that the diaphoresis, which is thus occasionally observed, is the result of the administration of the nitre; he considers it merely a symptom of the malady. According to his views the nitre merely acts as a sedative on the circulation. I agree with him, that the sedative action is the most powerful, and the one which is generally observed, but I think he underrates the influence of the salt on the secretion of the kidneys and of the skin. I have often seen them considerably increased under its administration.

At the same time that the general febrile symptoms abate the local inflammation also begins to subside. The swelling and pain gradually become less and cease to pass from joint to joint. When this is the case, if the ingestion of the salt is continued, there is seldom any relapse. The local and general symptoms gradually subside, and by the fifth, sixth, or seventh day the patient may be considered to be nearly convalescent, the cure being completed by the tenth or twelfth day. I have remarked that the tongue nearly always remains white and rather loaded as long as the nitre is administered, and that it only begins to assume its natural appearance when it is suspended. Then only, also, does the appetite return. When I have given nitre in large doses to persons not labouring under febrile symptoms, I have invariably found that it slightly disordered the functions of the stomach. It seldom occasions diarrhœa, being, as M. Martin Solon remarks, carried into the system and eliminated by the urine. This

physician, who is a good analytical chemist, and has paid considerable attention to the analysis of the urine in disease, states that he has always found all the nitre he administered to his patients in their urine, which accounts for its being necessary to continue its administration for some time if we wish to keep up the action it exercises on the economy. Although nitre, as far as my experience goes, is a decidedly efficacious therapeutic agent in the treatment of acute rheumatism, it does not always succeed. Occasionally cases occur in which it produces no effect whatever, the disease continuing to progress, or, at least, not diminishing under its influence. If, after administering it for four or five days, we find such is the case, that no favourable effect has been produced, we are warranted in presuming that we have to deal with one of these rebellious forms of the disease, and then it is as well at once to change the medication.

I have always found the nitrate of potass an extremely efficacious and valuable remedy in the slight forms of rheumatic affection, which are not unfrequently met with in damp weather in this climate, and which manifest themselves more by local than by general symptoms. I allude to the cases in which first one joint and then another becomes slightly painful and swollen, without any, or, at least, much general disturbance existing, and that for weeks or months at a time. These forms of rheumatism, although often the forerunners of a severe attack of rheumatic fever, are generally neglected, because neither the physician feels inclined to prescribe nor the patient to bear an active treatment: and yet the half measures which are often adopted are not sufficient to ward off the impending danger. I have treated by nitre several cases of this kind this spring. In every instance an ounce taken daily for a week has entirely eradicated all the symptoms which the patients presented.

The question that naturally presents itself to us is,—how does nitre act to produce the very decided effects which I have described? This, however, is a point on which I have but little to say. We are not as yet sufficiently acquainted with the state of the blood in rheumatism to be able to form even a well-founded supposition as to the intimate effects of the introduction of nitre, in large doses, into the economy: I shall, therefore, confine myself to the enunciation of the above therapeutical *facts*. Heart disease has been a very rare phenomenon among the patients whom I have treated or seen treated by the nitrate of potass. Indeed, I have long considered its frequency, as propounded by Bouilland and other writers, to have been grossly exaggerated. This I attribute to their mistaking the bellows-sounds of the heart, which are so common in persons who have been rendered anemic by loss of blood, for the symptoms of endocarditis. This belief is founded on my having met with many cases in which the mistake has certainly been made by disciples of Bouilland's school, and on my not being able to reconcile what these pathologists have written and said with what I myself have seen.

The treatment of rheumatism by nitre in large doses has hitherto appeared to me to present great advantages over the other plans of

treatment which are generally adopted, and more especially over the extreme depletion system. Whenever a patient loses much blood during the treatment of a disease, be it artificially or naturally, the convalescence is long, and during that convalescence he is much more exposed than a person in health to morbific agencies. I have known persons remain months, nay years, in an anemic state, weak, and sickly, after having been cured (?) of rheumatism by Bouilland's plan of bleeding *coup sur coup*. A treatment, therefore, which overcomes the disease without exhausting too much the sources of life is decidedly preferable to any other; and such is the treatment of rheumatism by nitre. I have many a time seen a strong muscular man, between twenty and thirty, brought into the wards, presenting the most marked symptoms of acute rheumatism: the pulse 100, full, bounding; the ankles and knees, wrists and elbows swollen, painful, and red; the skin hot, the face flushed: such a case, in a word, as a practitioner would consider himself called upon to bleed to deliquium. An ounce of nitre has been administered daily, and in two or three days the pulse has fallen and become soft, the skin moist, the joints less painful and less swollen, and in less than a fortnight the patient has been out of bed, allowed to eat, and able, after a week or two's rest, to resume his labours. The remedy, also, is cheap, an important consideration in the treatment of the poor, and is easily administered.

The above remarks must be taken for what they are worth. They are merely the impression produced on my mind by the observation of a considerable number of unrecorded cases, and are given more with a view of stimulating my professional brethren to try the agent recommended than of settling a disputed question. I am quite willing to acknowledge that it is not at all impossible that were I to give the nitrate of potass on a larger scale, and to record the cases, I might find reason to alter several of the opinions I have expressed. There is one important fact, however, connected with the administration of this substance, which what I have stated must have established, viz., that the nitrate of potass, given diluted, in very large doses, is not a toxical substance, and that although it be the "gunpowder salt," as an enlightened physician facetiously termed it before me, a short time ago, it does not give rise either to inflammation of the stomach or of the kidneys.

As I formerly stated, I have given nitre in the above manner in several cases of puerperal fever, and in other inflammatory affections, and think I have observed the same general depressing effect as in rheumatism, although in a less marked degree. May not nitre, thus administered, prove a valuable sedative medicine in febrile and inflammatory diseases?

Lancet, June 15, 1844, *p.* 374.

43.—ON THE USE OF CONIUM.

By J. Moore Neligan, M.D., Physician to Jervis Street Hospital, Lecturer on Materia Medica in the Dublin School of Medicine, &c.

[Dr. Neligan thinks that the almost universal discredit of the medicinal powers of conium is owing in a great measure to the heat which is employed in preparing the extract. He tests the extract by what is called the *potash test*, a very simple and certain mode of ascertaining its value.]

This consists merely in triturating in a mortar the preparation we wish to test with a small quantity of strong caustic potash, when the peculiar odour of the active principle, *conia*, is in a few moments emitted; care, however, must be taken not to confound this odour with that of the plant itself, from which it differs most remarkably, the latter bearing a singular resemblance to the smell of mice, while that of *conia* is a peculiar, penetrating, very disagreeable, somewhat alkaline odour, an acquaintance with which may be easily acquired by applying the test to the fresh green leaves, or to the recently gathered ripe fruit.

[Dr. Neligan uses what is called the *succus conii* instead of the extract. This is prepared as follows:—]

Take of fresh hemlock leaves any quantity, express the juice in a tincture press, set it aside for forty-eight hours, pour off the clear, supernatant liquor from the fecula and chlorophylle which it has deposited, and lastly, add to it a fifth part, by measure, of rectified spirit. This preparation I have found to keep well for two years, and its uniform strength, as well as the facility with which we can increase or diminish the dose we are administering, gives it a decided advantage over either the extract or powder of the fruit or leaves. The best time for gathering the leaves is when the plant is in full flower, and previous to submitting them to expression the stalks should be carefully picked out and rejected, the leafy part alone being used. As in many instances it is often of great advantage to possess an active preparation of a remedy in a solid state, I have tried many ways of preparing an extract of hemlock which would retain unimpaired the medicinal powers of the plant, and the best I find is to be obtained by submitting the expressed juice, prepared as above, to spontaneous evaporation; but even this extract, no matter how well and carefully preserved, soon loses all traces of *conia*.

Hemlock, when administered in medicinal doses to an individual labouring under disease, appears to me to produce its beneficial effects by allaying nervous excitability, and diminishing muscular pain; under its use also, both the force and frequency of the heart's action are lowered, but in no instance have I seen it produce the least tendency to drowsiness or sleep. This is quite consonant with the account given by Christison of the action of hemlock when its poisonous effects are produced: "that it does not excite convulsive

spasms, or bring on insensibility, but that it exhausts the nervous energy of the spinal chord and voluntary muscles, occasioning merely convulsive tremors, and slight twitches, and eventually general paralysis of the muscles, and consequent stoppage of the breathing." The active principle, *conia*, according to the same able authority, produces a similar remarkable action on the spinal chord, "a few drops killing a small animal, such as a rabbit, cat, or puppy, in a few minutes, causing general paralysis, slight convulsive tremors, and death from the suspension of the breathing, without any alteration in the appearance of the blood." Such being the effects of hemlock, and its alkaloid, when given in poisonous doses, it can be readily understood that when administered as a medicine it will produce no very apparent physiological action, and that in producing beneficial results, it appears to act insensibly on the system. The only manifest effect which I have seen it produce is where its use has been persevered in for some time, or the doses rapidly increased, when the patient generally complains of a disagreeable sensation of dryness of the throat, with a feeling of constriction and difficulty of swallowing, amounting to actual pain, and which always compels us either to suspend the use of the medicine altogether for a few days, or greatly to diminish the dose in which it has been given.

The diseases in which I have administered hemlock with decided advantage are rheumatic affections, both subacute and chronic, particularly when attended with severe pain, neuralgia, and senile gangrene. And although I have employed it very extensively, both in hospital and private practice in those diseases, I have met with but very few instances indeed in which this remedy failed to afford relief: nevertheless, some cases occasionally occur, in which, as in the case with most other medicines, it does not appear to produce the least benefit.

[The cases in which the *succus conii* was found most beneficial were obstinate rheumatic pains, severe chronic arthritis, subacute rheumatism of the muscles of the leg, and facial neuralgia. The dose was generally thirty minims three times a day, in a little water. This may be increased to forty or sixty minims, and decreased or left off according to the effects produced. The most unpleasant effect when given in full doses was a disagreeable sensation of dryness in the throat, accompanied with a feeling of constriction, and some difficulty in swallowing. When this is the case the medicine ought to be omitted for a short time.]

Dublin Journal of Medical Science, *Nov.*, 1844, *p.* 229.

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41. TREATMENT OF ACUTE RHEUMATISM BY CINCHONA BARK.

By John Popham, M.B., one of the Physicians to the North Infirmary, Cork.

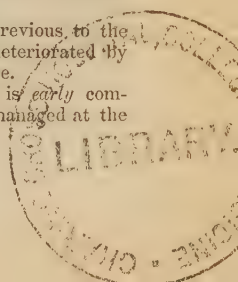
[It seems that this remedy was first used for rheumatism on account of the resemblance of this disease to certain periodic diseases

curable by bark. Dr. Haygarth, of Bath, some time ago very strongly recommended this remedy, and this opinion was corroborated by the late Dr. Davis. Dr. Popham gives his opinion of the medicine as follows.]

As far as we can judge, from the limited experience we have had of the cinchona, we would say, that though certainly not coming up to the indiscriminate approbation bestowed on it by Haygarth and his followers, yet it is a remedy of too great value to be overlooked by the profession. In the few trials we made of it at the *commencement* of the complaint, and while the symptoms were severe, we had little encouragement to continue its use, but the results were different when it came in at the turn of the disease. In twelve cases of acute rheumatism in which it was thus given at a period of the case from the fifth to the tenth day, nine were perfectly cured in less than three weeks, without relapse or loss of strength, and without those unruly pains and aches that so often survive the original attack. In three cases it had to be suspended, being used prematurely, and to all appearance drying up the tongue, and rekindling the febrile symptoms, and causing a short delay in the cure. On returning to its use at a more fitting period in these latter cases, it was used with good effect. When we compared the patients treated by bark as an adjunct to the depleting measures described above, with those abandoned after antiphlogistic measures to the *vis medicatrix naturæ*, the results of the contrast were sufficiently apparent, the latter remaining long on hand, and frequently becoming discouraged at the stubbornness with which the disease seemed to adhere to their constitutions. The cases wherein it was successfully employed were all of what is termed the fibrous character, or rheumatic fever, properly so called, in which the fibrous and muscular tissues were severely attacked, without the synovial membranes participating in the disease. When a probability existed that the pericardium or heart was affected, at a period either coincident with, or subsequent to, the attack of the other fibrous textures, the bark was not exhibited, at least until the inflammatory symptoms were checked, as other remedies were found far more effectual. In the synovial or bursal variety (the capsular of Macleod), which is so strongly allied to gout as to exhibit its characters more decidedly than those of rheumatism, the bark seemed to disagree with the acute stages, aggravating the symptoms; but in very chronic cases it seemed of service. It is with much hesitation that we venture to lay down anything like general data to guide its administration, but the impression suggested by our limited trials led us to place some dependence on the following results.

That it is important to procure due evacuations previous to the exhibition of the bark, except the patient be greatly deteriorated by constitutional debility, or the protraction of the disease.

That it is more *quickly* successful when the disease is *early* combated by depleting measures, than when inefficiently managed at the onset, and allowed to take root in the system.



Hence, that it is more likely to extinguish the disease and prevent chronic infirmity in the sequel of *first* attacks being uncomplicated, than when a habit has been formed by reason of repeated relapses.

That the periodicity of the symptoms either peculiar to the attack, or produced by treatment, and the duration and apyrexia of the intervals, afford strong presumptive arguments for the use of bark.

That bark is especially called for in cases where there is complete atony of the cutaneous vessels, so that the skin is unceasingly pouring out acid colliquative sweats, giving it a dull and parboiled appearance, at the same time that the pains are abated, and the pulse small, and indicating debility.

That to produce its effects, quantity is not by any means as essential as in intermittent, and that large quantities, especially of the sulphate of quinine, derange the stomach in many cases, and bring back the fever.

That it is judicious to administer it at the periods of remission, and stop it at the return of the exacerbations.

That it is injurious when important visceral disease co-exists, and is especially contra-indicated in cerebral or the acute stage of cardiac complications.

Lastly, that in the synovial variety, it is inferior to other modes of treatment; but in persons of a rheumatic diathesis, when from the long continuance of the disease the strength has suffered, and disfiguration of the joints has occurred without serious destruction, a course of bark, combined with sulphur, &c., often prevents the recurrence of subacute attacks, and promotes the absorption of the effused synovia.

In conclusion, it must be observed that the cases in which this medicine is given should be kept in strict surveillance, and it should of course be suspended if it cause gastric symptoms. With this caution—and it is not more than is required by other remedies—the physician will often be indebted to the preparation of bark for completing the cure of a disease, that if left to fix itself in the system, will weaken the energies, and damp the happiness of his patients more than any other.

Dublin J. of M. S., Sept., 1844, *p.* 59.

45.—ON POISONING BY ŒNANTHE CROCATA.

By. P. Bossey, Esq.

[Several melancholy cases of poisoning by this plant are related by Mr. Bossey. Several convicts were at work in the Royal Arsenal at Woolwich, and mistook the plant for celery. They ate a considerable quantity and were soon attacked with the most violent symptoms, strong convulsions in paroxysms, with insensibility. In the more violent cases the face was bloated and livid, the foam about the mouth was sanguineous, the breathing stertorous and convulsive, pupils dilated and insensible, with most of the other

symptoms of apoplexy. These cases died. In others, the symptoms were milder and recovery took place. These were able to swallow emetics of salt and mustard with warm water, by means of which they vomited freely and ejected a large quantity of imperfectly masticated root and were thereby greatly relieved. The convulsions ceased, sensation and reason were restored, but there remained giddiness, pallor of the face, dilated pupils, coldness of the extremities, much weakness, severe rigors, and a slow feeble pulse.]

Further vomiting was promoted, and more of the root discharged. Friction and warmth were applied to the extremities, whilst ammonia and rum with thin gruel and other drinks were administered internally till reaction was more fully established.

Emetic doses of the sulphates of zinc and copper, and also mustard and water, were given without effect to the patients lying on the deck of the vessel. They were also bled very largely both from the arms and jugular veins. The introduction into, and removal of warm water from, the stomach by the pump brought away small portions of the noxious roots. Cold affusions upon the head perseveringly used lessened the struggling and produced some exhaustion. In three cases the subsequent fits became less violent; they passed into a state of maniacal delirium, with much jactitation of the limbs, and after some hours were removed into the hospital. But in one more patient all these remedies were ineffectual: he died convulsed at a quarter before one o'clock. As a last effort, the trachea was carefully opened by an incision, and artificial respiration kept up, but life was quite extinct.

Several of the men who had eaten the root, seeing the others suffer, took the salt-water emetic with success, and had no symptoms of being poisoned; others felt giddiness and faintness in a slight degree, and at 6 P.M. there were upon examination eleven who required watching, and were therefore sent into hospital.

It appears that the effects which the œnanthe produced in these cases were a violent irritation of the mucous membrane of the œsophagus and stomach, more particularly of the follicular structures, and a state of severe and universal spasm of the muscular tissues; it also induced insensibility, coma, delirium, extreme congestions of internal organs, and, in those cases immediately fatal, it occasioned permanent fluidity of the blood.

The first indication of treatment was doubtless to evacuate the stomach; but, as its sensibility was destroyed, and the poison was taken in the solid form, this could not readily be accomplished. Large and immediate depletion seemed to be essentially useful, by removing the imminent danger of extravasation from over distension of the vessels; the cold affusion was also beneficial in rousing the patient, so as to make him sensible to the emetics, and so were purgatives during the after treatment.

Called thus in a moment to so many urgent cases of poisoning, it became needful to use such remedies as were at hand, but upon re-

flection it seems to me proper, in similar circumstances, to rely chiefly on emetics given early, on large blood-letting *immediately* employed, and the cold affusion.

Although the attempt to re-establish respiration by tracheotomy failed in the case selected for it, in consequence probably of the great effusion of blood afterwards found on both hemispheres of the brain, yet it is worthy of a future trial in single cases, where it can be more conveniently practised.

Considering the great activity of this poison, that it is capable, as we have seen, of extinguishing the life of a strong young man in full health in *one hour*, and that many other fatal cases are recorded, it is rather singular that the nature of the active principle of the œnanthe is not yet well known, or the plant applied to medicinal use.

Medical Gazette, May 31, 1844, *p.* 289.

46.—ON SCROFULA.

By M. Lugol, Paris.

[We take the following remarks from a very able notice of M. Lugol's work on scrofula published in the Lancet. M. Lugol we need hardly say is the great authority on this subject in France. Having devoted a considerable portion of his time to its study, and having 120 beds in the Hospital of St. Louis at his service, with the freedom of choice among many hundred patients which present themselves, besides an extensive private practice, we may readily conceive that his opinions on this disease are deserving of the best consideration.]

M. Lugol looks upon scrofula as an hereditary cachexia of the entire system with the intimate nature of which we are totally unacquainted, but the manifestations of which may be followed from birth in the diseases of every tissue and of every organ. The maximum of the scrofulous diathesis is the production of tubercle, which may be generated in any region of the economy. The tubercle in M. Lugol's eyes is an organised abnormal formation, endowed with a life and nutrition of its own, and passing through the various phases of its existence like all other abnormal tissues. The development of tubercle takes place in different parts of the human economy at different periods of life, owing to various modifications of local vitality. Accompanying the production of tubercle, anteriorly or posteriorly to it, various forms of disease occur in the different tissues of persons labouring under the cachexia. These various morbid forms are all manifestations of the scrofulous diathesis. Thus, the mucous and cutaneous surface, the bones, cellular tissue, joints, &c., are attacked with chronic inflammations, viz., ophthalmia, coryza, catarrh, diarrhœa, &c.; lupus, acne, pustular and papular eruptions; osteitis, caries, necrosis; white swellings, cold abscesses, &c. These constitute the *cortége* of the scrofulous cachexia. These are the diseases

which, more or less developed, accompany the martyr of scrofula from his birth to his grave, rendering manifest to the medical observer the cachexia under which he labours, even in the absence of tubercular formations.

The characters of hereditary scrofula in a family are the existence of the scrofulous *complexion* among its members,—the great mortality which is observed in such families, more especially during infancy. These two characters may be studied—in the family itself, in the different branches which originate from the same stock, in the children of different marriages. With reference to parents who procreate scrofulous children, their giving birth to such children may be owing to their original health, in which case either they are scrofulous or affected with pulmonary tubercles; have been scrofulous during their infancy, and have ceased to appear so; have brothers and sisters who are scrofulous;—or it may be owing to an acquired state of health. Thus, syphilitical parents, parents who have given themselves up with excess to venereal pleasures; who are too young or too old; whose age is disproportionate; who are suffering from epilepsy, paralysis, or insanity, all give birth to scrofulous children; also the father whose strength is disproportioned to that of the mother. In some instances the disease is evidently transmitted by heredity without the original or acquired health of the parents being such as at first to explain the circumstances. Parents may only show symptoms of scrofula after the birth of scrofulous children. Hereditary scrofula never skips a generation. The hereditary causes of scrofula may be united, in variable number, in the same individual. Marriage is the most ordinary cause of the propagation of scrofulous diseases. Scrofula is very frequent among foundlings and orphans. The seeds of scrofulous disease may be transmitted by the nurse to her nursling.

Scrofulous families, says Lugol, may be recognised by the general impression of debility which all the children present; their state of health being at the most negative, and always exclusive of the attributes of health and strength, and of a good organisation. Their physical forms are devoid of harmony; there is no proportion between the limbs and the trunk; the former are badly attached to a body too long or too short. The development of the similar regions of the trunk is unequal, often giving rise to deformity. The size of scrofulous children is generally short, although sometimes they grow to an extreme height. The mouth is small, and the teeth are black, and soon decay. The spongy tissue of the bones is hypertrophied, so that the joints are disproportionately large. The spine and bones of the pelvis often give way more or less. The digestive functions are frequently in a continued state of atony, of inertia; such children have no appetite, and do not take enough food to support the economy; others present a voracious appetite, by which, however, they do not seem to profit. The face is pale, the breath fœtid. Constipation alternates with diarrhœa, in which latter case a

considerable proportion of the food passes through the intestinal canal only partly digested. The skin and cellular tissue is extremely emaciated, or in a peculiar state of unhealthy, hardened hypertrophy. It is often dry, and covered with papulæ of lichen, or prurigo. Children who present these characteristics are generally idle, apathetic, and have no inclination whatever for exercise. Menstruation is very late with girls, and the age of puberty with both sexes is retarded. Writers on scrofula have generally considered a certain degree of *embonpoint* and freshness of complexion to be peculiar to scrofulous constitutions, especially with women. This peculiar kind of beauty is certainly observed, but much less frequently than is generally supposed, and generally co-exists with some scrofulous symptom which reveals its nature, such as a too-dilated pupil; slight epiphora; habitual coryza; obstinate chillbains; a small mouth, of an ogee form; teeth too long and too close, often black and carious; too short and thick a neck; habitual leucorrhœa; dysmenorrhœa; anorexia; frequent sore throats, &c. This state of freshness and fulness seldom lasts long; it disappears early in life, leaving behind a wrinkled skin, which disfigures women who ought still to be in the bloom of youth.

Parents who are not themselves scrofulous, may, under certain circumstances, procreate scrofulous children. The abuse of venereal excitement will lead to this result; and instances of this kind are frequently seen in the higher walks of life. Early marriages are followed by the generation of scrofulous children. A man ought to be five-and-twenty before he marries; before that period his organisation is seldom sufficiently matured to enable him to procreate healthy children. This law holds good throughout nature. The first year or two a fruit tree bears, the fruit is small in size, indifferent in quality. Such marriages are principally seen in the lowest and the highest classes of society. Scrofulous children are still more frequently the result of late marriages. If either of the parents has arrived at the time of life when the system begins to decay, their children are generally scrofulous. At the age of forty-five the procreative faculty begins to decline in man. For a few years, however, he is still able to procreate healthy children, but after fifty-two they seldom present the conditions of health. Thus, when a healthy man, advanced in life, marries, his first children are healthy, but they deteriorate as they increase in number. The same remark applies to women. As they approach the critical age their powers of reproduction diminish, and after forty their children are often scrofulous. Disproportion between the ages of the parents is a cause of scrofula among children. The wife ought to be a few years younger than the husband; if she is older the children are generally scrofulous. A man whose bodily strength is not that of his sex, especially if it is much less than that of his wife, will generally have scrofulous children; consequently the popular opinion that the children of a weak scrofulous man married to a strong robust woman will be healthy, is

a fallacy. Diseases of the brain appear to modify the reproductive powers. Those who are labouring under insanity, paralysis, or epilepsy, generally procreate scrofulous children.

Scrofula may be inoculated by suckling,—a fact which has been remarked by various authors. Nurses, however, should only be made responsible for scrofula occurring in children whom they suckle, when, on the one hand, it is quite evident that no traces of that disease exist in the child's family, and when, on the other, the disease can be traced clearly to the nurse. When the constitution of the child is contaminated from this source, its health will form a striking contrast with that of the other members of the family. As a necessary consequence of the above fact, scrofulous mothers ought never to suckle their own children.

Lancet, June 15, 1844, *p.* 383.

47.—*On the Indian Hemp.*—[Dr. Lawrie, of Glasgow, reports the effects of this medicine on twenty-six cases, and he draws the following conclusions :—]

1st. It seems to belong to that class of narcotics which rapidly induce excitement and intoxication, followed by sleep, neither sound nor refreshing.

2nd. In a full dose it acts powerfully on the heart, causing palpitations, and rapid, weak, intermittent pulse ; and on the nervous system, producing delirium, coma, convulsions, and dilated pupils.

3rd. Its effects are generally transitory. In one case, however, the intoxication and dilatation of the pupils lasted nearly forty-eight hours.

4th. It is a very uncertain agent, in some cases producing the most violent and seemingly dangerous symptoms, in others being nearly inert.

5th. It very frequently causes vomiting, which, whether it occur spontaneously or from emetics, very speedily relieves its unpleasant and perhaps dangerous effects.

6th. Applied round the eye, it does not dilate the pupil.

7th. It exerted little influence on the few patients to whom it was given in the form of enema.

8th. I do not think it is a valuable addition to our narcotic medicines. In very few instances did it act as an agreeable soporific and anodyne ; in none did it succeed when opium had failed ; and in one case only was it preferred to opium. I do not think it is to be trusted to.

9th. So far from acting generally as an anodyne, its effect was so disagreeable, that the majority of those who took it once, only did so a second time on compulsion ; and this is the more remarkable as the patients on whom I experimented belong to a class to whom stimulants of all kinds are familiar, and who would greedily swallow opium and spirits to an unlimited amount.

10th. It seemed useful in two cases of subacute rheumatism.

11th. It caused an immediate craving for food, and in a few permanently increased the appetite.

London and Edinburgh Monthly Journal of M. S., Nov., 1844, *p.* 947.

48.—*On the Exclusion of Air in the Treatment of Certain Diseases.* —[A favourite application in France, in cases of internal inflammation, is a large poultice. This is very useful, for example, in pleuritis and peritonitis. On this mode of treatment Dr. Marshall Hall makes the following remarks:—]

It is probably by the exclusion of the atmospheric air that other remedies for inflammatory diseases act; the various plasters, the nitrate of silver, even blisters, have this effect. I do not, however, mean to insinuate that they have no other. Cataplasms may further act by their warmth and moisture. The nitrate of silver possesses some extraordinary power over the actions which constitute or coincide with inflammation. But, certainly, mere adhesive plasters have an efficacy in cases of chronic chest affection, in lumbago, sciatica, and other forms of rheumatism, in neuralgia, and even of scirrhus, which cannot be easily explained.

One of my patients, a martyr to extensive sciatica, was desired to envelope the limb in adhesive plaster. He was a joiner, and an ingenious man. He prepared the common stocking material with glue, dissolved in the proportion of one ounce to two pints of water, and had it spread over, when dry, with galbanum plaster, and if this exuded it was dusted with flour. By the steady application of this plaster his severe rheumatism was cured.

I was once informed by a celebrated physician that he had prescribed adhesive plaster to be applied over a scirrhous tumour of the mamma. It remained adherent for years, and the disease remained stationary. The plaster then separated, and from that period the disease pursued its devastating progress.

Certain modes of the treatment of burns consist in excluding the influence of the atmospheric air.

Some affections of the face are remedied by applying a layer of gelatine. Isinglass is dissolved in water, and the solution is applied with a camel's-hair pencil, and allowed to dry. I have just witnessed some very remarkable effects of this mode of treatment, which I will communicate hereafter.

Lancet, July 20th, 1844, *p.* 526.

49.—REMARKS ON GOUT.

By Alexander Ure, Esq., Surgeon to the Westminster General Dispensary.

It has been uniformly observed that persons who indulge habitually in the use of animal food and fermented drinks, and lead at the same time an irregular, sedentary, inactive life, are prone to gout. A

morbid plethora supervenes, which gives rise to undue tension of the arterial system. The blood is loaded with nitrogenized principles and calcareous salts, and if the kidneys and skin fail in removing these from the system, they are sooner or later deposited upon the synovial membranes and the tendons, or within the arterial walls; in the former as urate of soda, in the latter as phosphate of lime.

[From the researches of Frommherz and Gugert it appears that previous to an attack of gout the urine contains no uric acid, whereas at other periods there is generally a superabundance, "so much so, that the urine of gouty subjects is remarkable for holding in suspension and throwing down that acid in the crystalline form." Mr. Ure argues that in consequence of this uric acid circulating in the blood, *urate of soda* will necessarily be formed. This he shows from various experiments. It has also been observed that in gout there is generally a deficient action of the liver, and that whatever stimulates this gland to a more healthy secretion is beneficial. For this purpose Mr. Ure directs attention to *sulphate of manganese*.]

If a drachm of sulphate of manganese be dissolved in about half a pint of water, and swallowed before breakfast, it will generally occasion after the lapse of an hour or so one or more liquid stools. With the view of testing whether bile was thus discharged to any amount, a portion of the loose feculent matter was digested with strong alcohol, in order to separate the mucus, and thrown upon a filter; a limpid olive-coloured solution was obtained, which after evaporation by a water-bath to the consistence of honey, yielded with the addition of boiling muriatic acid, a notable quantity of biliary resin, together with a little fatty matter. Thus, unequivocal proof was afforded of the excretion of bile.

This salt may be therefore reckoned essentially *cholagogue*, in the strict sense of the word. Its action is prompt, and soon over, nor does it produce any of those distressing and lowering effects which are so apt to follow the exhibition of mercury and antimony in certain constitutions. A retired navy surgeon, labouring under a feeling of weight and tenderness in the region of the liver, dragging sensations referred to the right shoulder, uneasiness about the epigastrium, dull headache, want of appetite, and paleness of the alvine evacuations, afraid to have recourse to mercurial preparations, took by my recommendation the above salt in moderate doses, at intervals during three weeks. The result was complete removal of the preceding symptoms, and restoration to permanent health.

Sulphate of manganese has a cooling and bitter taste, resembling that of Glauber salt. Dr. Thomson (Chemistry of Inorganic Bodies, vol. ii., p. 587) says, "it may be administered as a cathartic, in doses of from half an ounce to an ounce." I have always found a much smaller quantity suffice, and should be reluctant to give it to that extent. It acts most efficiently when dissolved in a considerable quantity of water. On particular occasions infusion of senna furnishes a useful adjunct.

I forbear touching upon colchicum. That potent drug we are told suppresses but does not cure gout, and, when long continued, inflicts serious injury upon the constitution. In many instances it would appear to act as a slow poison. If, indeed, as Sir B. Brodie alleges, it stops the biliary secretion, its protracted use must be fraught with mischief. It ought, therefore, only to be exhibited in urgent cases, and that sparingly.

In order to abate the erethism of the vessels of the gouty circulation, to further the absorption of effused fluids, and to arrest the recurrence of attacks, which, in the long run, lead to distortion and ankylosis, the topical employment of acetic ether and rectified coal naphtha will be found highly serviceable. The former was first introduced to the notice of the profession by M. Sedillot, in the Transactions of the Medical Society of Paris, (No. x. Mess. An. 5) but never seems to have attracted attention here. Acetic ether generally determines a speedy sedative agency in the more acute stage of the malady, when applied with gentle friction over the whole of the affected surface to the amount of half an ounce every twelve hours, provided after each friction the patient is kept warm in bed. In the subacute form of the disease, I have witnessed very beneficial effects from simply pencilling over the part with a camel-hair brush dipped in naphtha.* In some instances, indeed, this seemed to have the power of warding off an impending paroxysm. I was first led to try it in gouty cases, from being told by an extensive manufacturer of the article near Birmingham, that affections of the joints were unknown among his workmen, while they were common enough among the operatives of other factories in the neighbourhood.

Coal naphtha is a pure hydro-carbon, almost identical in nature and properties with the naphtha which occurs native on the shores of the Caspian sea, in Persia, and other countries of Asia.

Among other local applications from which occasional advantage has been derived, may be enumerated tincture of arnica, and an ointment composed of one part of extract of belladonna, incorporated with eight or ten parts of cerate. Poultices are objectionable because they relax the capillaries.

After extensive experience in the employment of naphtha, I can confidently assert that no instance has ever presented itself of the slightest tendency to what is called "gouty metastasis," that is, the translation or removal of the disease from the extremities of the body to some internal part or organ. It need scarcely be observed, that all outward means, to be availing, must be aided by appropriate hygienic and therapeutic measures.

In order to get rid of the œdema which usually supervenes after a fit of articular gout, it is advisable to support the limb in a position

* Care must be had not to confound this with a spirit sold under the same name, used for making hatter's varnish, and lately introduced as a medicine. The properties of the two are quite dissimilar.

considerably elevated above the level of the body, so as to favour the ascending circulation. By this procedure absorption is facilitated. The support, to be efficient, however, ought to be steadily maintained both night and day. Although rather irksome at first, patients become habituated to it. An oblong deal box, having the sides a little elevated and sloping, with belts slung across, will be found to answer the above purpose.

As a remedial agent, seemingly endowed with qualities capable of counteracting and removing tophaceous disposition, silicate of potash, the *liquor of flints* of the older chemists, deserves a trial. This salt passes through the system unchanged, and can be detected in the urine of animals to whom it has been given by the mouth. It exercises a very powerful solvent action upon the urate of soda. I have prescribed it for one or two patients in doses of ten and fifteen grains twice a day, dissolved in six or eight ounces of water, with apparent benefit.

The efficacy of the benzoic preparations in controlling phosphatic deposition, to which gouty people are likewise prone, was shown by me in a paper published in the Medical Gazette of February, 1843; and if, as Professor Liebig states (Lancet, June 8, 1844,) "the larger the amount of soda which combines with these acids," alluding to the sulphuric and hippuric, "the less comes to the share of the uric acid," it may be inferred that the administration of benzoic acid, will, in consequence of the surplus production of hippurate of soda, necessarily tend to supersede any inordinate formation of urate of soda.

Med. Gazette, Nov. 8, 1344, *p.* 190.

50.—*Treatment of the Itch in Belgium.*—The following circular has been addressed to military surgeons by the Inspector-General of the Belgian army :—

Each patient is to be supplied with an ounce or an ounce and a half of liquid sulphuret of lime in a small pot ; this quantity he is to rub carefully and slowly with his hands on every part that is covered with papulæ. If there be any papulæ on the back, another patient is to rub the liquid upon that part. The operation is to be repeated three times in the twenty-four hours, so that each patient consumes three or four ounces of the sulphuret daily. A bath is to be taken every alternate day ; the frictions are to be suspended on that day. Fifteen frictions (or ten days use) are usually sufficient for the cure of the disease, if the medical officer in charge sees that the remedy is properly used.

The sulphuret is prepared thus : take of sublimed sulphur 16 pounds, and of quick lime 32 pounds : boil in 80 lbs. of water for three-quarters of an hour. Let the mixture rest for some time until it settle, and then let the clear fluid be decanted off. Boil the residue afresh in about the same quantity of water, treat it in a similar manner, and add this decoction to the first. Usually 140 pounds of the sulphuret, at 12° by the areometer, are thus obtained. If

the liquid be more dense, it should be lowered to this standard by the addition of rain water.

51.—*On the Jamaica Dogwood.*—Dr. Hamilton, during a visit to the Antilles, was struck by the powerful narcotic effects on fish produced by the bark of the roots of the *Piscidia erythrina*, or *Jamaica dogwood.* Thinking that this might be of utility as a medicine, he found that the tincture, prepared by macerating the bark of the roots gathered during the period of inflorescence, and before the appearance of the leaves (the piscidia being one of the few deciduous trees indigenous within the tropics), in four times its weight by measure of *rectified* spirit for twenty-four hours, and filtering, was the only eligible mode of preparation. The following was his experiment, and its result.

Having been for some time a martyr to the tooth-ache, which had deprived me of my natural rest, I determined to make the first trial of my new medicine upon myself ; and accordingly on going to bed, mixed a drachm-measure of the tincture with a rummer of cold water, and drank it off—waiting to observe its effects. Soon after receiving it into the stomach, I experienced a violent sensation of heat, which gradually increased in intensity, awakening in my mind a suspicion that the prediction, of my friends, who assured me I should poison myself, were on the eve of fulfilment. However, the deed was done, and I resolved to abide the issue without flinching. The sensation of burning gradually extended itself to the surface, and while I was considering what antidote I ought to employ, a profuse diaphoresis burst out from every pore, and a sleep the most profound I ever experienced arrested me so abruptly, that I remained motionless for the whole night, with the uncorked phial in one hand and the glass out of which I had taken the dose in the other, till after the sun was high above the horizon on the following morning, a space of twelve good hours, when I first returned to consciousness, free from every pain or ache, and without any of those unpleasant sensations which invariably succeeded to an overdose of opium.

I had certainly taken a larger dose than was, perhaps, necessary ; but the result was most triumphant. I afterwards employed it with equal success, as a topical application, in a number of cases of carious teeth, introducing it on a dossil of cotton into the diseased cavity ; and after a single application, I never heard of a return of pain in that tooth. Wishing to compare its powers with those of opium, I took equal measures of water, containing the animalculæ of the mosquito, and having dropped into one glass as much of the tincture of opium as was necessary to make them fall motionless to the bottom, I added an equal number of drops of the dogwood tincture to the other, with a corresponding effect. I then decanted the supernatant liquor, and washed the mass of animalculæ in each glass with fresh filtered water from the dripstone ; after a few ablutions, those which had been stupified by the tincture of opium recovered,

and swam about with their wonted vivacity, while all my efforts to revive those acted upon by the dogwood proved ineffectual.

Dr. Hamilton subjoins certain cautions as absolutely necessary to be kept in view. "First, the bark of the roots should be collected about the period of the full moon, in April, at which time the tree is in full flower, or coming into flower, and the leaves have not yet unfolded. Next, that the best rectified spirit alone should be used in making the tincture—the active principle of the bark being only soluble in spirit, and precipitating on the addition of water, with which it makes a milky compound. It is possible that a longer maceration than I employed might be successful in extracting more completely the active principle; but it might be desirable to divide the tincture so obtained, keeping that made during the first twenty-four hours distinct from the second, or making a portion with twenty-four hours's maceration, and another portion with forty-eight hours' or more; and comparing, by some common test, the relative qualities of each. The following is the formula for the tincture I used:

℞ Pulveris crassi Corticis Radicis Piscidiæ Erythrinæ, ℥j.; Spiritus Vini Rectificati, fl℥iv.; Macera simul per horas viginti et quatuor in vasi aperto et cola. Dosis fl℥j et infra ex haustu aquæ puræ."

Med. Chir. Rev., Oct., 1844, *p.* 551.

52—*Proto-Chloride of Mercury and Quina.*—[Mr. M'Dermott has prepared a combination of these two medicines which has been found beneficial in some obstinate skin disease which had resisted other remedies. The bichloride in this combination performs the part of an acid and the alkaloid quina forms the base: thus "a double salt, a proto-chloride of mercury and quina is obtained, not mechanically but chemically combined. On subjecting it to the strictest analysis no trace of bichloride could be detected."

Dublin Med. Press, No. 275.

[Mr. Hamilton reports several cases treated by him in the Richmond Hospital, by means of this salt. We give one as an example.]

The first case was that of a labourer, aged forty, who had suffered from lupus superficialis of the left arm for a twelvemonth; it occupied the lower half of the arm, and the upper part of the fore arm, and presented the usual characteristics of that disease, a dull red shining surface, with many superficial ulcers, having a tendency to burrow under the skin; there was also a small oblong patch of the same on the sternum. He had been treated by two medical men without any benefit. One grain of the proto-chloride of mercury and quina was given three times a day. When he had taken twenty-one grains, rather profuse salivation set in. A very marked improvement had taken place in the local disease, the redness had paled, most of the ulcers were healed, or become superficial. The

medicine was omitted for a few days and then resumed, a grain night and morning. He was dismissed cured, having been a little more than three weeks in hospital. Nothing but simple dressing was applied to the ulcers.

Dublin J. of M. S., November, 1844, *p.* 299.

53.—*On the preparation of Carbonate of Lithia.*—Lithia, from which the carbonate is made, was discovered by M. Arfwedson, a Swedish chemist, in the *petalite* found at Uton, in Sweden; it also exists in the *triphane* found in the same locality. To prepare the salt, the mineral containing the lithia is first to be porphyrized, and then calcined in a platinum crucible, with five times its weight of pure nitrate of barytes. The product of the calcination is to be immersed in from fifteen to twenty times its weight of water, and hydrochloric acid added in excess, which entirely dissolves it. Evaporate the solution to dryness, treat the residue with water acidulated with hydrochloric acid, and filter to separate the silica. Into the filtered solution pour sulphuric acid in excess, to throw down the barytes; saturate the liquor, from which the sulphate of barytes has been separated, with ammonia, which throws down the alumina; and the liquor containing sulphate of lithia with some ammoniacal salts, is to be evaporated to dryness, and calcined so as to drive off the ammoniacal salts.

The residue, which consists of sulphate of lithia, is to be treated with water, the solution filtered, concentrated, and precepitated with carbonate of soda. The precipitate should be washed with a very small quantity of water.

Carbonate of lithia is found in solution in some mineral waters, and more especially in those of Bohemia; it is also found in some of the mineral waters in France. We can readily understand, therefore, the cause of the advantage derived from these waters in the treatment of patients affected with gravel, as well as those troubled with calculi of the bladder.—*Journal de Chemie Médicale.*

Pharm. Trans., Sept. 1, 1844, *p.* 132.

54.—*On the Drying of the Cormi of the Colchicum.*—On this subject, Dr. Houlton says, the observations which I wish to make are upon the method in which the cormi of colchicum should be managed, so as to ensure their drying spontaneously without being sliced. It is simply this: they are to be stripped of their loose dry coats, and the bud or little bulb, the rudiments of the future plant, is to be carefully picked out—it is a very small plant, but easily seen; this part has a high vital endowment, and is very tenacious of life, and unless removed the cormi will not readily become dry; yet when that is removed to any dry place, they will become exsiccated without any trouble, and that in a short time. To show the difference that this circumstance makes, let a few be placed in their entire state near those that have been mutilated, and the difference in a week or two will be very manifest, the entire cormi will appear quite fresh.

The plan I adopt is more safe and economical than that usually followed, as the cormi are not exposed to a high temperature, nor are their juices under the direct influence of the atmosphere, both of which circumstances are injurious to the more delicate medicinal vegetable articles.

Pharm. Tran., July 1, 1844, *p.* 18.

55.—*Mode of favouring the Therapeutic Action of the Resin of Jalap.*—In a paper in the *Journal de Chemie Médicale*, M. Rigghini, (d'Ollegio,) states that the syrup of rhubarb is a good agent for testing the purity of the resin of jalap; and that it moreover possesses the property of increasing its action, and on that account merits the attention of practitioners. It should be employed in the following manner—Take any given quantity of the resin of jalap, reduce it to very fine powder in a mortar, and afterwards triturate it with a sufficient quantity of the syrup of rhubarb. On diluting the mixture with water, if the resin be pure it is seen in a state of the most perfect division in the solution; a circumstance which does not occur if it be adulterated with any foreign body. So much for the determination of the purity of the medicine. But there results from this divisibility of the resin of jalap by means of the syrup of rhubarb, a more valuable advantage for therapeutics, and that is, the substance thus comes into contact with a larger extent of surface of the mucous membrane of the bowels, a circumstance which enables it to produce its pharmacological effects, without the necessity of having recourse to such large doses as have been hitherto given; thus 15 or 20 centigrammes of this resin divided in the syrup of rhubarb, and diluted with 60 or 100 grammes of water, are sufficient to produce four or five stools in robust individuals. This medicine, thus administered, produces in some individuals an emeto-cathartic effect. In fine, the purgative power of the resin of jalap, according to M. Rigghini, is so much increased by this new mode of dilution, that it must be administered with considerable caution.

Lond. and Edin. M. J. of M. S., Oct., 1844, *p.* 879.

56.—*Pills of Iodide of Iron.*—Dr. Christison recommends the following simple method of preparing these pills, which was communicated to him by Mr. Robert Leslie, late Apothecary in the Royal Infirmary of Glasgow.—Take of iodine 127 grains, iron wire about the thickness of a thin quill, half-an-ounce, distilled water 75 minims. Agitate them briskly together in a strong ounce-phial, provided with a well-fitted glass stopper, until the froth which forms becomes white, which will happen in less than ten minutes. Pour the liquid upon two drachms of finely-powdered loaf-sugar in a little mortar, and triturate immediately and briskly for a few minutes; add gradually a mixture of the following powders, viz., liquorice powder half-an-ounce, powder of gum arabic a drachm and a half, and flour one drachm. Divide the mass into 144 pills.

Each pill contains about a grain of iodide of iron. The only alteration I have made in Mr. Leslie's formula, is the substitution of

coarse for fine iron wire—first, because less heat is produced; and secondly, because the resulting solution is more easily poured off.

In operations on the large scale, the bottle ought to be wrapped in a strong towel, in case of an explosion being caused by the evolution of steam from the heat produced; and even on the small scale, the stopper must be held firmly, otherwise it will probably be blown out, and the materials lost.

After all that has been recently written on the action of sugar in preventing the proto-salts of iron from alteration under exposure to the air, it is unnecessary to point out the reason why these pills keep remarkably well. With the *syrupus iodidi ferri* of the last Edinburgh Pharmacopœia, and this *pilula iodidi ferri*, it appears to me that every other pharmaceutic form of the salt may be dispensed with.

Pharm. Trans., August 1, 1844, *p.* 79.

57.—*On some of the Salts of Iron.*—There are three preparations in the "London Pharmacopœia," of the salts of protoxide of iron, namely, the sulphate, the mist. ferri co., and the pill. ferri co.; to these the Edinburgh College adds a fourth, the *ferri carbonas saccharatum*. In speaking of Mr. Phillips' proposal for preparing a pure sesquioxide, we recommended the use of the last named preparation in tic doloureux. This, however, was in the absence of something better. The objections to the mixture and pills have been stated, and repeated by every writer on pharmacy, and by the editor of the Pharmacopœia himself. The inadmissibility of the sulphate is known by every practitioner. The saccharine carbonate does not possess any stability, as the iron gradually is converted into protoxide.

Mr. Bullock has suggested the following simple, practicable, and, as it appears to us, unobjectionable method of administering several salts of the protoxide :—

In the first place, he observes, that in preparing Griffith's mixture, or the pil. ferri, it is especially necessary to select pure materials. The sulphate of iron should be in well defined crystals. The sodæ carb. (subcarb,) also pure, since this often contains 50 per cent. of sulphate of soda or other impurities. For the mist. ferri co., the myrrh and other ingredients being made into a mixture, a sufficient amount of the iron and alkali should be added to each draught as it is administered :—

> Sulphate of iron, four grains; Sodæ carb, (subcarb), five grains; Potass, or bicarb., four grains. Mix.

When it is not deemed necessary to administer myrrh, the above may be mixed with sugar, and be kept as a ready-prepared pulv. ferri co., in well stopped bottles. In this case the alkali employed must be potass.

Lancet, July 13, 1844, *p.* 508.

SURGERY.

58.—ON THE FORMATION OF ARTIFICIAL ANUS.

By M. Amussat, Paris.

[We find a very able review of this subject in the British and Foreign Medical Review for October, which we will endeavour to condense so as to present the most practical features to our readers. The works referred to at the head of this review are those of Amussat, Vidal and Jukes. We may add the name of Mr. Teale of Leeds, whose able article "on intestinal fistula" in the Cyclopedia of Practical Surgery embraces this subject, and which will be found to contain an excellent account of the views of the different authors who have treated on this operation.

Amussat is confessedly the surgeon who, although not the originator, has been the means of its being introduced to the notice of modern surgeons. He discusses the method of making an artificial anus both in the anal region and in the lumbar colon; and attempts to establish settled rules of practice where these have not hitherto existed.]

The malformations commonly termed imperforate anus may be divided into two classes. In one the gut is not impervious, but opens in some preternatural situation, as into the bladder, the urethra, or the vagina. In the other the rectum is really imperforate, being either obliterated to a greater or less extent, or obstructed by a membranous septum, at a variable height above a naturally formed anus; or else it terminates in a cul de sac at an indeterminate height in the pelvis without any external aperture. The operation hitherto performed in all those cases is, M. Amussat maintains, quite insufficient, and ultimately attended with uniform failure. In the first two cases of imperforate anus on which M. Amussat operated, the rectum terminated between one and a half and two inches from the surface; in each case he formed an artificial anus by the usual method of simply cutting down on the rectum, but both infants died jaundiced in a few days, which he attributed to absorption of the bile and meconium, consequent on their coming into contact with a wound of such considerable extent; he therefore determined in future to adopt

a method calculated to obviate that inconvenience, which we shall perhaps best explain by giving an abstract of the case in which he first carried it into effect.

A female infant was born with the following malformation : the vulva and anus were both naturally formed externally, but the recto-vaginal septum was deficient above, and only existed inferiorly to the extent of about one third of an inch, so that the finger could be passed from either canal into the other. The upper portion of the rectum had no communication with the cloaca common to the vagina and the anal portion of the rectum ; but its closed extremity could be felt at a height of about two inches towards the left sacro-sciatic angle. The anus thus communicated directly with the vagina above the imperfect septum already mentioned, but had *no connexion* with the rectum, which terminated two inches above it, and was in fact, properly speaking, *deficient* to that extent. Under these circumstances M. Amussat determined

" To make an incision anterior to the coccyx but posterior to and not involving the vaginal anus, to detach the posterior wall of the vagina from the coccyx and sacrum with the finger or the knife, to reach the cul de sac of the rectum, seize it with a hook, detach its entire circumference rather with the finger than by the knife, draw it down to the external wound, open it freely, give exit to the meconium, and secure, by points of interrupted suture, the edges of the opening in the intestine to the lips of the cutaneous wound."

[This operation was perfectly successful, although nothing is said as to how far the patient possessed command over the retention and evacuation of the fæces.]

The essential feature in the operation performed in this case is the bringing down the upper portion of the rectum to the level of the external wound, and thus obtaining along the entire extent of the artificial trajet the presence of tissues whose organization is adapted to the functions they are called on to discharge, and its execution " is based on the possibility of elongating the extremity of the great intestine from one to two inches, the inferior mesenteric artery alone preventing a still greater elongation, which the sigmoid flexure of the colon would readily admit." But in order to ensure a sufficient elongation of the gut, M. Amussat, in his third memoir, especially insists on the necessity of forming the artificial anus, not in the situation of the natural aperture, but posterior thereto, in the coccygeal region. When the case we have just given an abstract of was communicated to the Royal Academy of Medicine, it was suggested that the rectum should have been connected with the anus in order to take advantage of the presence of the sphincter ; and M. Amussat was then inclined to admit the propriety of the suggestion, and regretted that the apprehension of forming a recto-vaginal fistula had deterred him from making the attempt ; he subsequently, however, became convinced that the rectum probably could not have been sufficiently elongated for that purpose, and in a similar, or

indeed in any other case, would again form the anus in the region of the coccyx, because the rectum has a shorter distance to traverse to reach the surface if drawn directly *backwards*, than if drawn downwards to the situation naturally occupied by the anus; he therefore makes the external incision immediately in front of or even on the left side of the os coccygis, which bone he would excise, if necessary, to gain room; and in one case did remove its extremity for that purpose. (L'Examinateur Méd. 1843, pp. 198-216.)

The cases in which M. Amussat recommends this operation include almost every variety of malformation of the rectum. He would apply it in every case of true imperforation of the rectum, in which it was possible to reach the gut, with the exception of those only in which the anus, otherwise well formed, is obstructed by a mere *superficial* membrane; but if the septum, however thin and yielding, however it may be distended by the accumulation of meconium, is situated *above* the anus, he insists that it is insufficient to destroy the septum, "that no case can be cited in favour of that method," which fails because of the difficulty of keeping an opening above the anus dilated; and M. Amussat therefore lays it down as a rule, that in such cases "we should operate as if there was no anus, as if the rectum was completely deficient throughout the entire extent of its anal extremity, and cut backwards and draw the rectum not downwards to the anus but directly backwards," etc. (L'Examinateur Méd. 1843, p. 198.) When the rectum opens into a neighbouring organ, the indication, according to M. Amussat, is the same as in complete imperforation of the anus, unless the abnormal anus sufficiently discharges the function of defecation; but when the gut communicates with the bladder or with the urethra, its posterior wall only should be drawn down. In those rare cases where the intestine opens on the parietes of the abdomen, the operation is inapplicable, and if the orifice is insufficient and cannot be dilated, an artificial anus should be formed in the lumbar region.

[The reviewer does not agree with Amussat in his indifference to preserve the utility of the sphincter muscle. He thinks that when the gut can be brought down to the muscle it is better to do so, so as to preserve its functions to the artificial opening. There seems to exist a great difference of opinion on this subject among the French surgeons. At the same time it is satisfactory that the facts already ascertained "seem to justify the hope that whether we operate for imperforate anus by the old method or that of Amussat, the power of retaining the fæces may be preserved, or that, at all events the infirmity will be greatly less than many of the French authors anticipate as inevitable."]

It cannot, we conceive, be questioned that the method adopted by M. Amussat in his first case, was a most meritorious and happy improvement of the older operation for forming an artificial anus. The intestine having been within reach of the finger could have been easily opened, (though perhaps not very easily kept pervious,) but

from the nature of the malformation in no other way than by the novel method of bringing down the cul de sac of the rectum to the level of the integuments, could an infirmity of the most disgusting kind have been obviated. But though in this and analogous cases M. Amussat's operation is a most admirable improvement, we think he seeks to extend the method too far.

In the first place M. Amussat unquestionably exaggerates the imperfection and failure of the ordinary mode of operating in imperforation of the rectum and of the anus, when he says in some passages that "every," and in others that "almost every" operation has failed in which more than a superficial membrane had to be divided, and even alleges, as we have already observed, that there is no example of the division of a simple septum within the rectum having proved successful. That M. Amussat has fallen into a strange mistake in thus imputing uniform failure to the operation by simple incision sufficiently appears from the cases of B. Bell and Mr. Ferguson.

[But it seems that however important Amussat's method is in some cases, it ought not to be invariably followed. In confirmation of this remark he seems even to distrust his own rules, from which the reviewer shows that he deviated in some of his cases. Numerous instances however have occurred in which it was impossible to succeed in making an artificial orifice near the anus. In such cases other operations have been adopted.

M. Littré was the first in modern times to suggest that the bowel should be opened through the parietes of the abdomen. He does not however describe his operation, but has generally been supposed to mean that the cavity of the peritoneum should be opened in order to reach the sigmoid flexure of the colon in the left iliac region, and then to secure the open intestine at the external wound by means of a thread passed through the mesentery. The reviewer, however, informs us that this is not Littré's meaning, but that his leading idea was "the possibility of uniting the upper and lower portions of the rectum by suture after having opened their closed extremities, and this failing we should *at least* connect the upper portion of the *rectum* with the external wound. There is not a word about the sigmoid flexure of the colon, the thread in the mesentery &c." The forming of an artificial anus in the abdomen was first done by Pillore, of Rouen, in 1776. He formed this artificial anus in the *cæcum* which was opened through the peritoneum.]

The operation, commonly termed Callisen's operation, consists in opening the descending colon from the lumbar region, without wounding the peritoneum. M. Amussat, besides modifying the steps of the operation, has also extended it to the ascending colon, in which he has been followed by some other practitioners. It is not known who first suggested this proceeding.

[M. Amussat has lately established beyond any question that the danger and difficulty of opening the lumbar colon, as recommended

by Callisen, whether in the old or young subject, had been exaggerated by all previous writers; and although he cannot be said to have originated the operation, we think that he has the credit of its modern introduction.]

The lumbar region, in which Callisen's operation is to be performed, is a quadrilateral space, bounded above by the last false rib, below by the crest of the ilium, behind by the longissimus dorsi and sacro-lumbalis mass of muscles, and anteriorly by a vertical line falling on the centre of the crest of the ilium. The colon in this space lies above in front of the kidney, from which it is separated by fat; in the centre of the space it corresponds to the transversalis fascia, by which and a little fat it is alone separated from the quadratus lumborom muscle; below it corresponds to the crest of the ilium; anteriorly and externally it is in contact with the small intestines; its distance from the spine varies as it is contracted or distended. The important point, however, is the relation of the posterior aspect of the colon in this space to the peritoneum; is it constantly or nearly so denuded of peritoneum to a determinate extent, and that both in the adult and in the infant? M. Amussat maintains that in the adult a lumbar mesocolon never exists, that the intestine is denuded of peritoneum, at least on its posterior third, to which extent the cellular tissue, external to the peritoneum, constitutes its outer layer or sheath. This cellular space, which is formed by the separation of the layers of the peritoneum, commences at the angle of union of the transverse and lumbar colon, and has no very constant line of demarcation below, but usually terminates about the crest of the ilium. Its lateral extent is exactly defined by two of the three longitudinal muscular bands which characterize the great intestine, one running in front of the lumbar colon, the other two externally and internally, precisely along the lines whence the peritoneum is reflected on the parietes of the abdomen. But the condition of the parts varies, according to the manner in which the examination is made, and with the condition of the intestine; and hence, according to M. Amussat, have arisen the misconceptions respecting the relations of the colon and the peritoneum, and the failures in attempting to open the intestine without wounding the serous membrane. If we open the abdomen in front and draw the colon forwards, the traction will sometimes cause the formation of a mesocolon; but the practically important point is that the extent of space denuded of peritoneum varies with the caliber of the intestine. When the colon is much contracted, he has seen a very small interval between the folds of the peritoneum; but as the colon dilates, for example, if we inflate it with air, the peritoneal folds and small intestines are pushed back, and the cellular space enlarges proportionally to the distension of the gut; and if the intestine is now punctured through, the air escapes, yet the colon does not retract, as the small intestines would, because it adheres, by its posterior surface, to the parietes of the abdomen; and as the same thing occurs when the colon is dilated, from tympa-

nitis or by the feces, the operation is thus facilitated. Such being the disposition of the peritoneum, if a vertical incision along the external border of the quadratus lumborum muscle is carried too far outwards, we may, especially if the intestine is contracted, open the peritoneum, as was done by Callisen and Duret; but a transverse incision will greatly facilitate the discovery of the portion of the intestine denuded of peritoneum. The colour of the intestine sometimes offers an important peculiarity: it is generally of a greenish-yellow, longitudinally disposed, which contrasts with the undulated yellow appearance of the small intestines. If, when the colon has been denuded, we open and draw the edges of the incision to the lips of the external wound, it will be found that the entire caliber of the gut will not prolapse, as would be the case with the small intestine; its posterior wall alone yields, forming a kind of prolonged tube, communicating with the intestine, so that on passing the finger into the gut there is scarcely any salient ridge opposite the opening. The same disposition exists on both sides, but the relations of the peritoneum are more variable on the right side. In new-born infants Sabatier and others say that the existence of a kind of lumbar mesocolon is the rule, its absence the exception, and therefore object to Callisen's operation. M. Amussat, on the contrary, maintains that the disposition of the parts in early life is even more favourable for the operation than in adults; 1st, because the situation of the lumbar colon is more constant in early life; and 2nd, because the kidney forms an unerring guide to the colon, which always lies immediately external to that organ. The intestine also seems more firmly adherent to the walls of the abdomen than in adults; and as the operation could only be required in infants for congenital malformation, the gut would be distended to the maximum by the accumulation of meconium. In one dissection only out of twenty did M. Amussat find a lumbar mesocolon in the infant, and in that case the intestine was empty. It appears to be admitted by M. Amussat that the operation would not be uniformly practicable on a child; as in the third memoir, p. 235, he says, "I am more and more satisfied that the anatomical dispositions favourable to the operation are the rule, the reverse the exception. M. Baudens, on the contrary, without disputing the absence of a lumbar mesocolon in early life, thinks that from the mere fact of the great intestine being less developed in the infant than in the adult, the cellular space in the former must be so small as to occasion great difficulty in reaching it without wounding the peritoneum, and that consequently Callisen's operation should be limited to the adult, unless indeed experience shows, which he thinks possible, that the operation in the loin, even if the peritoneum be opened, is preferable to that in the groin.

As to the mode of performing the operation, we shall advert to but a few points. M. Amussat, instead of the vertical incision mentioned by Callisen, prefers a transverse incision, four or five fingers' breadth long, midway between the last false rib and the crest of the ilium; and he divides the deeper parts, or even the skin if the patient

is fat, crucially, in order to gain room. The advantages of the transverse incision are, 1st, that it makes the operation easier and more certain, and avoids the danger of dividing the lumbar vessels and nerves; 2nd, that it facilitates finding and opening the intestine without wounding the peritoneum; and 3rd, it enables us to establish the artificial anus more anteriorly; with a view to favour which, the opening in the intestine should be drawn forward and secured to the anterior angle of the wound. M. Baudens, however, objects to the transverse incision, the liability of wounding some of the large branches of the genito-crural and inguino-cutaneous nerves, and also that it exposes too small an extent of the intestine, which should be opened by an incision at least one inch and a half long, as otherwise the anus will contract; M. Amussat, moreover, he says, is obliged to make a crucial incision in the deep parts, which perils the lumbar arteries, is painful, and augments the extent of the wound. In order to combine the advantages of a vertical and transverse incision, without the disadvantages of either, M. Baudens proposes an oblique incision. M. Amussat warns, when operating on the infant, not to expose the kidney too much, and to avoid a crucial incision; but in his first operation on the child, he laid bare the entire kidney, and in the second, divided both the skin and muscles crucially.

The most delicate step of the operation is opening the intestine, the great difficulty being to identify the colon. If the intestine is contracted, it may be completely concealed by the quadratus lumborum muscle, whose external border should then be raised, or some of its fibres divided. The greenish colour of the colon may, it is said, occasionally help us to recognize it; but pressure and percussion with the finger are the best means of ascertaining its presence; and the absence of resistance external to the great intestine is an important sign. In his third operation, M. Amussat detected the colon from the greater development of its muscular fibres compared with those of the small intestine. M. Baudens objects to all those signs. If the colon is filled with feces, it will be hard, and then may be confounded with the kidney; but if it is supple and elastic, from being distended with gas, then we cannot discriminate it by the touch from the small intestines. M. Baudens, however, boasts that he "has given this operation more certainty, a precision, so to say, mathematical," by the employment of exploratory acupuncturation: before opening what he suspects to be the colon, he introduces an acupuncture needle furnished with a canula, and on withdrawing the needle, either gas escapes or the canula is soiled with feces if it has entered the colon. "Here, then," he exclaims, "is an infallible sign, the merit of inventing which, I trust, will not be disputed with me." M. Baudens only forgets to inform us how we are to know whether the instrument has penetrated the large or the small intestine. The kidney, we are told by Amussat, is an unerring guide to the intestine in the infant.

[The reviewer ends his able article with the following remarks.]

Imperforate anus is probably the case in which the propriety of forming an artificial anus in the lumbar colon will be most generally admitted, provided always that an attempt has been previously made to establish an artificial anus, *if possible*, in the anal region; nor should this attempt be lightly abandoned: we have already seen that M. Amussat, in one instance, proposed to discontinue an operation commenced in this situation; the child, it is true, died, but it will scarcely be maintained that an operation in the lumbar region would have been attended with a more favorable result. Some, doubtless, will agree with MM. Vidal and Baudens, that Littré's operation should be preferred, because the peritoneum is very likely to be wounded in opening the lumbar colon in the infant: be it so; we shall not rely on M. Amussat's dissections and operations to raise the contrary presumption; but as they certainly show that there is at least a chance of effecting our object, that chance should not be thrown away.

An artificial anus has also been established in the abdomen for the relief of invincible constipation, whether produced by an undiscoverable cause, or known to depend on obstruction of the great intestine, either from cancerous or non-malignant disease of its own coats, or the pressure of some tumour external thereto. In a few instances also the operation has been performed when the bowels were still pervious, with the view of relieving extreme distress, caused by the difficulty of evacuating the feces, and in the hope that the progress of the organic disease by which that difficulty was caused, might be retarded on removing the irritation excited by the pressure and the passage of the feces. Much difference of opinion exists as to how far the operation is indicated under the several circumstances here enumerated. We would certainly abstain from interference when the nature and situation of the obstruction were both unknown, or rather, when the situation of the obstruction could not be approximately determined by percussion, &c. We feel extremely averse to the operation in cancerous disease, but are not prepared to maintain that it could never be justifiable, for we have witnessed cases in which, though the bowels were not completely obstructed, yet the extreme misery endured by the patient would possibly tempt us, in similar circumstances, seeing the favourable result of M. Amussat's fifth case, to give the sufferer the chance of relief; and if the obstruction were complete, it would be perhaps a *duty*, rather than a matter of discretion, to attempt to prolong life. In obstruction depending on non-malignant disease, or disease not known to be malignant, there can, we conceive, be no more question as to the propriety of the operation, than there would be in a case of strangulated hernia, where the intestine was supposed or known to be sphacelated.

The situation selected for the formation of the artificial anus must obviously depend on the determination of the situation of the obstruction above which the opening must, of necessity be made. M. Baudens maintains that, however low down in the great intestine the

obstruction may be, we should always operate on the right lumbar colon, because gas, he says, is exclusively generated in the great intestine; and gas being "the scourge" of a patient with an artificial anus, we should seek to prevent its generation, by permitting the feces to traverse as short a space as possible of the large intestine. We shall not waste time in refuting this strange proposal, nor can we now enter on the very important questions of the diagnosis of the nature and position of the various obstructions which may raise the question of operation.

British and Foreign Medical Review, October, 1844, *p.* 452—471.

59.—ON DISARTICULATION AT THE ANKLE.

By William Lyon, Esq., Lecturer on Surgery, and lately one of the Surgeons to the Glasgow Royal Infirmary.

[This operation which has been so strongly recommended by Mr. Syme is certainly a great improvement in surgery and will be available when neither of those recommended by Hey and Chopart can be useful. It will, in fact, leave the patient a very useful leg. In a case related by Mr. Lyon the disease commenced as osteitis of the anterior tarsal and metatarsal bones of the right foot which advanced, notwithstanding every means were used to stop its progress. In about seven months caries to some extent had taken place, but still the os calcis and astragalus seemed sound, and Chopart's operation was proposed but declined. In another month these bones became involved in the disease, and disarticulation at the ankle was now advised and agreed to.]

The operation was easily and quickly executed. The cartilage covering the tibia was healthy, but the malleolar processes were so soft as to excite the fears of some of my professional friends present. Similar conditions of bones are, however, common in strumous subjects; and the result has shown that the alarm in this instance was groundless.

Convinced of the propriety of the step by Mr. Syme's reasoning, I made, as a *safety valve*, an opening at the most dependent part of the posterior flap; dressed with a few strips of plaster, and, as I have usually done after amputation, applied cold lotion over the wound.

Scarcely any local disturbance followed the operation; indeed I never saw less, if so little, after an amputation of such extent; the general condition was equally favourable with the local.

Upon dressing on the fifth or sixth day, I found about a finger's breadth of the anterior margin of the posterior flap dead, and saw that adhesion had not any where occurred. The dead portion soon separated, the discharge was healthy and in small quantity, granulations sprung from the synovial membrane covering the granular cartilage, and from the cellular membrane or inside of the flap, and the two surfaces soon united. The patient rapidly improved, was out

of bed in fourteen days after the operation, and but for the raw surface left by the loss of margin of the flap, would have been quite well a week since; had the want of strength not prevented him, he at this time, twenty-five days after the operation, would be, with aid of crutches, taking exercise in the open air.

With all this, I think there are some objections to the operation, which, however, may probably be obviated by attending to certain particulars. I think I erred in applying cold lotion to the wound; I am satisfied that the propriety of this practice after amputation by the circular method, may reasonably be questioned; for the flap, composed only of skin and cellular substance, and much separated from its connections, has its circulation diminished by the cold, and it may, by the same cause, be entirely arrested. In this operation the flap is larger, and still further detached, than in amputation by the circular method; the application of cold is therefore still more hazardous, and should never, in my opinion, be employed; it ought to give place to means for retaining or supplying heat, as carded cotton or the warm-water dressing.

There is another cause for the sloughing of the anterior margin of the posterior flap, which occurred in one of Mr. Syme's patients, and also in my own: the posterior flap is very large, and the condensed cellular substance and thick cutis composing it are not very liberally supplied with blood; being separated from all its subjacent connections, it can only receive circulation from the vessels that pass through the skin and cellular substance of the posterior and inferior part of the leg, to which it is alone attached; the circulation in vessels so much insulated, and running so far from their origins, as those in the flap, being consequently weak, must needs be liable to be altogether interrupted.

To meet this objection, I think more than usual care should be taken to place the margins of the anterior and posterior flaps in *close, easy, contact*, so that, union by the first intention occurring, blood from the vessels of the anterior will pass into those of the posterior flap, and thus its death be prevented. This is the more requisite, since immediate union between the synovial membrane covering the cartilage, and the condensed cellular membrane lining the flap, is not to be expected. The same reasons which urge us, in our efforts to obtain immediate union, to recur to the cautious employment of sutures and plasters, enforce the avoidance of pressure over the flap; therefore the propriety of not employing compresses or bandages.

So much was I impressed with the risk of losing the flap, from the cause above mentioned, and also with the difficulty of easily forming it, that I was much inclined to have operated by two lateral flaps: this mode would certainly facilitate the performance of the operation, but would sacrifice the thick, dense tissue obtained from the heel,—one of the principal advantages of Mr. Syme's method.

To insure, as far as possible, the success of this operation, it will be advisable to keep the cut edges of the flaps in *close, gentle*, appo-

sition, by interrupted suture and short strips of plaster; to promote the flow of blood into the flap, by supporting its temperature with carded cotton, warm water dressing, or the like; and, in order to secure free discharge of secretions, to make as recommended by Mr. Syme, a fair dependent opening in the posterior flap. This latter point will be the more necessary if the close approximation I have suggested be adopted.

Medical Gazette, May 31, 1844, *p.* 302.

[Mr. Syme has made the following observations on this subject since our last volume was printed.]

It may seem a startling, but it is nevertheless a true statement, that amputation at the ankle-joint, with hardly any exceptions, may, and ought to supersede amputation of the leg below the knee. In order to establish this position, it is necessary to show, in the first place, that the stump which results from the former operation is fit for the duties required of it; and, secondly, that the patient may, under the various circumstances concerned, be relieved as effectually in the one way as the other.

The idea of amputating at the ankle-joint is not new, the operation having been performed on the Continent by different surgeons before I thought of it; and it would probably ere now have become generally adopted, but for the doubt that was entertained as to the ends of the bones being sufficiently covered to afford the patient a comfortable and useful support for the limb. For my own part, when I read of dissecting flaps of skin from the instep, or sides of the foot, I felt so much distrust in the protection that could thus be effected against the injurious effects of pressure on a part so exposed to it, that I had no desire to try the experiment. But it occurred to me that by performing the operation in a different way, all such objections might be obviated. This was to save a flap from the sole of the foot and thick integuments of the heel, by making a transverse incision, and dissecting these parts from the *os calcis*, so that the dense textures provided by nature for supporting the weight of the body, might still be employed for the same purpose. Two trials of this operation having proved satisfactory, I communicated them to the profession, and am glad to find that not only my colleagues in the hospital here, but also practitioners in other places, have already acted upon this recommendation. The additional experience of my own practice now enables me to suggest some improvements in the mode of procedure—point out an error to be avoided—and verify the expectation formerly expressed as to amputation of the leg being hardly ever required.

The best instrument for performing the operation, is a large bistoury, or small amputating knife with a blade about four inches long. There is no occasion for a tourniquet, as the assistant has complete command of the vessels by grasping the ankle. In my first operations, the flap was made unnecessarily long; and I feel confident

that the following directions may be trusted for exactly determining its proper extent. The incisions across the instep and sole of the foot should be curved, with the convexity forwards, and exactly opposite each other. A line drawn round the foot mid-way between the head of the fifth metatarsal bone and the malleolus externus will show their extent anteriorly, and they should meet a little way farther back, opposite the malleolar projections of the tibia and fibula. Care should be taken to avoid cutting the posterior tibial artery before it divides into the plantar branches, as in two cases where I did so, there was partial sloughing of the flap. If the ankle-joint is sound, the malleolar processes should be removed by cutting pliers; but if the articulating surfaces of the tibia and fibula be diseased, a thin slice of these bones should be sawn off. The edges of the wound should be stitched together, and lightly dressed. When the cure is completed, the stump has a conical shape, and has for its apex, or central point of pressure, the thick integument which covered the heel.

In proceeding to consider the circumstances in which this operation may be performed, it seems worthy of notice, that until a recent period, amputation of the leg was in this country generally resorted to for the removal of diseased bone, when the part affected extended upwards beyond the metatarsus. The operation of Chopart might frequently have accomplished all that was requisite, but unfortunately laboured under a prejudice which opposed its adoption. This was, that the extensors of the heel, being deprived of antagonizing action, would point the stump downwards, so as to render it useless as a support for the body. In 1829, for reasons elsewhere stated, though there was no precedent for its performance in Edinburgh, I ventured upon this partial amputation of the foot, in a case where removal of the leg had been proposed, with perfect success, and without the slightest inconvenience of the kind anticipated. Encouraged by this result, I resolved to adopt the operation; and before long performed it six times with entire satisfaction. Since that time the operation has been established here, and regularly practised in cases admitting of its application.

Although the introduction of Chopart's operation considerably abridged the field for amputating the leg, there were still two situations in which caries frequently occurs, where it was beyond the reach of any partial removal of the foot. These were the joint between the astragalus and os calcis, and the ankle-joint itself. In the former of these situations, the diseased bone is so near the fibular side of the heel, that it is apt to seem within reach of the gouge or other means of extirpation; and attempts have often been made to effect this, but seldom, if ever, with success, owing to the caries extending along the complicated articulating surfaces of the bones affected. I have succeeded in such a case, by making a fair breach through the foot from side to side, and passing a thick seton, which could be made the vehicle of red precipitate and other escharotics; but even this treatment cannot be depended upon, and

its failure, in a case where I had ventured to indulge hopes of success, led me to think of contriving a method of amputating at the ankle-joint which might afford relief under such circumstances, and afford the patient a comfortable stump. In the case of John Wood, related in the Monthly Journal for February, 1843, the disease was thus situated, between the astragalus and os calcis. Soon after that case had terminated favourably, I met with another related in the same paper, where the ankle joint itself was affected; and did not hesitate to repeat the operation. The gentleman who was the subject of it, though long in very indifferent health from other causes, now walks with ease and comfort.

Compound dislocation of the ankle-joint, either with or without that curious displacement of the astragalus which results from falling with great force on the heel, was formerly held to require amputation of the leg. The authority of Sir A. Cooper's experience encouraged attempts to preserve the limb in such cases; and in private practice both forms of the injury are now frequently conducted to a successful issue, though in general through a protracted process of recovery. But it must be admitted, that many lives have been lost, especially in hospitals, from trying to retain the limb. In the Royal Infirmary, I find that of 13 patients who had suffered compound dislocation of the ankle, and were not subjected to amputation, only 2 recovered; and even in the event of recovery the foot generally remains in such a state of stiffness, weakness, and sensibility of external impressions, as to be rather an encumbrance than a support to the patient. Now, all this danger, tedious confinement, and permanent discomfort might be obviated by amputating the foot in the first instance. So long as the only alternatives were attempting to preserve the limb, and amputation of the leg, there was a strong inducement to abstain from operating. But if the patient's safety and speedy recovery may be ensured by taking away merely that part of the limb which at the best can hardly be of any value either as to use or ornament,—and at the same time producing a stump in all respects preferable to a shattered, stiff, irritable foot, I think there should be little hesitation in resorting to amputation at the ankle-joint under the circumstances in question.

It has now been ascertained that amputation at the ankle-joint may be performed so as to afford a stump in every respect convenient and comfortable, retaining the full use of the knee-joint, and enabling the patient to walk with perfect freedom. It has also been shown that by means of this operation caries of the upper range of the tarsus, of the joint between the os calcis and astragalus, and of the ankle-joint itself may be removed; while compound dislocation of the ankle, and destruction of the foot beyond the extent admitting of Chopart's operation, may also be remedied by it. But what other occasion besides these is there for amputating the leg? Malignant tumours of the tibia and fibula require amputation of the thigh, and compound fractures of the leg, so severe as to demand removal of the limb,

hardly admit of the operation being performed below the knee, on account of the soft parts so near the seat of injury being unfit for healing action. The cases, therefore, if any, must be very few. In my own practice, since adopting amputation at the ankle-joint, I have removed only one leg below the knee, under very peculiar circumstances, which did not permit the milder measure to be adopted.

In conclusion, it may be remarked that the advantages of amputation at the ankle-joint, as compared with amputation of the leg, are not limited to the smaller degree of mutilation and greater utility of the limb, since the operation is also attended with much less danger. This will appear when it is considered, 1st, how much less the shock must be, from the small extent of parts removed, which is little more than in Chopart's partial section of the foot. 2nd, that the smallness of the arteries divided prevents any risk of serious hemorrhage. 3rd, that the cancellated texture of the bone exposed is not liable to exfoliate. 4th, that from the medullary canal remaining entire, inflammation of its contents, and also of the veins is prevented.

In confirmation of these grounds for favourable expectations as to the diminution of danger, I am now able to add the proof of experience, since in fourteen cases where the operation has been performed, eight in my own practice, and six in that of others, there is not one fatal result.

Lond. and Ed. M. J. of M. S., August, 1844, *p.* 647.

[This eminent surgeon reports another interesting case of excision of the elbow-joint, which he performed in the usual way. He says—]

The articulating surfaces of all the bones were divested of cartilage and carious. They were exposed in succession, and removed by the saw, which I find preferable to the cutting pliers for this purpose. No bad symptom followed the operation: the wound healed satisfactorily, and the patient very soon began to regain his health: the cough ceased, and the other indications of a phthisical tendency disappeared. He was dismissed on the 14th of August, able to resume his occupation as a "skinner." I saw him lately, and could not have distinguished the imperfect arm, unless my attention had been directed to it.

Previous to 1829, the operation of cutting out the elbow-joint had not been performed in Great Britain. In that year I recorded three cases of its employment, and, in 1831, I published a treatise on the subject, containing *fourteen* cases. Since that period the operation has been established in the practice of surgery, and some credit has been generally conceded to me for my share in the introduction of this improvement. But the reviewing gentlemen of Dublin, doubtless through their morbid sensibility of Saxon injustice, have charged me with claiming more than my due, and decking myself with plumes rightfully belonging to their Surgeon-General. "Why did not Mr. Syme say, Great Britain *and Ireland?* Our readers will form their

own judgments, but we think it would ill become us as editors of an Irish journal, did we not secure to our fellow-countryman his just rights. Sir Philip Crampton, we repeat, performed the operation three years before Mr. Syme; and his interesting paper, in the fourth volume of the *Dublin Hospital Reports*, drew general attention to the subject, four years before the appearance of Mr. Syme's work." Now, I beg to remind these patriotic gentlemen, that my first paper on the subject (Excision of Joints) was published in 1826, while Sir P. Crampton's did not appear until 1827. And, in the next place, I entreat them to notice that I never assumed any credit for originality in contriving, or priority in adopting, this operation. Excision of the elbow-joint was proposed by Mr. Park, of Liverpool, and performed in France by M. Moreau; also more recently by M. Roux, and in Ireland by Sir P. Crampton. But the profession had not adopted the operation. And the fact of only one case occurring in the extensive practice of the Surgeon-General, who had tried the experiment, was not calculated to remove the existing prejudice against it.

If any credit is due to me, it is for awakening the attention of the profession to the operation; enforcing its advantages by establishing them on a broader base of experience than had previously been done, and divesting its performance of some imperfections, which, in no small degree, impeded the facility of its execution, and lessened the perfection of its result. For instance, in the few cases subjected to operation before the date of my paper, no distinction had been drawn between the truly carious portion of bone, which alone requires to be removed, and the effusion of new osseous substance, which causes an irregular thickening of the bone considerably beyond the extent to which it is diseased. In consequence of thus confounding the sound and morbid parts, much more was taken away than required removal, and the cure was not only greatly protracted, but rendered much less complete than when the operation is properly performed. Instead of confining his saw to the articulating extremity of the humerus, which is the only part liable to caries, Sir P. Crampton applied it three inches above the tuberosity of the bone, so that he must have removed at least four inches of its length; and it is no wonder that at the end of seven months the patient, by a voluntary effort, could only "give a slight degree of flexion to the fore-arm." If the operation had always been performed in this way, and with a similar result, do the Dublin Reviewers imagine that it would ever have been generally adopted by the profession? In taking my leave of them, I have only further to say, that though unwillingness to criticise the practice of a gentleman so distinguished as the Surgeon-General formerly restrained me from dilating upon his solitary case, I felt no desire to treat it with disregard, and thus concluded my paper of 1829: "The almost forgotten operations of Moreau will now perhaps be reconsidered, and the recent case of Mr. Crampton, together with those now submitted to the public, will, I hope, make such a deep impression on the profession, as may induce practitioners to pause

before they mutilate a fellow-creature by amputating his arm for disease or injury of the elbow-joint.

Ibid. August, 1844, *p.* 645.

[Dr. Edward Bonino has written an excellent memoir on excision of the head of the femur, in which he has referred to twelve cases. The first was one of Mr. Whyte in the Westminster Hospital, another belonged to Mr. Hewson, of Dublin.]

We have here, in the twelve cases, five which succeeded perfectly, a favourable result which the most strenuous advocate for amputation could never look for; and if we were to put out of the question those cases in which the operation ought never to have been performed, and of these there are several, this practice would of course contrast still more favourably with the other. When we consider, in addition, the fact that the limb in all the cases has been left in a state well adapted for all the ordinary purposes of progression, &c., we conceive that the two operations will scarcely bear comparison.

We find that our latest writers on military surgery speak highly in favour of the operation. Mr. Guthrie, in his clinical lectures, speaks thus: "I have not done this operation on a living man, but *you must do it*, and I am sure that in the end you will succeed. You ought not to be allowed to take out a limb at the hip joint, unless the head and neck of the thigh bone are injured; and you ought not to take it out if they are, unless the shaft of the thigh bone is irreparably injured also." Sir G. Ballingall, in his Outlines of Military Surgery, says, "The hazardous character of wounds involving the hip-joint is well known to every experienced surgeon, and the removal of the thigh at the hip-joint, recommended for some of these wounds, is an operation which no one can contemplate with any sanguine hopes of success. The experience of the excision of the head of the femur in cases of caries is not extensive, but it appears to me to be encouraging; and since I have become familiar with the excision of other joints, I have frequently reflected upon the possibility of substituting the operation of excision for that of amputation at the hip-joint, in some of those cases of gun-shot wounds where the latter has been recommended. And I am now encouraged to speak with more confidence on this point from finding the operation advocated by one of the first authorities in military surgery, Mr. Guthrie, in his clinical lectures recently published." M. Bonino does not deny the fact that the operation is a very serious one; on the contrary, he admits that it is; but he very justly remarks that this is by no means a sufficient reason for rejecting it altogether. Serious operations are always authorized by the circumstances which demand them —they are only legitimately performed, in fact, in diseases which if left to nature, inevitably lead to a fatal result. The severity of the operation is then, if we may so speak, proportioned to the serious nature of the affection which demands it.

In all these cases, then, in which any hope of recovery by surgical interference is offered, the surgeon has only the alternative of choos-

ing between excision of the head of the bone and amputation at the articulation. The question then is not whether excision be a severe operation—this no one doubts—but whether it be less severe than amputation.

M. Bonino then proceeds to draw a comparison in detail between the two operations. We shall not follow him through that part of his paper; the result of his comparison we have already given.

The cases in which he recommends the section of the head of the bone are the following:—

1st. Dislocation, with protusion of the head of the bone through the soft parts, which it is found impossible to reduce.

2nd. In gun-shot wounds involving the upper part of the bone.

3rd. In caries of the upper part of the femur, whether primary or secondary.

In regard to the two first, the opinion of the profession appears to be very much alike, but in regard to the last there is still, and very naturally, much difference of opinion.

The great objection to interfering in cases of caries consists in the fact that the cotyloid cavity is very generally involved in the disease, and likewise in the difficulty, we might almost say impossibility, of saying when it is not. Any operation undertaken when this part is affected is worse than useless, as we only remove part of the disease, leaving behind, perhaps, the portion most likely to lead to a fatal result. Such indeed appears to have been the cause of death in some of those operated on.

M. Bonino appears to agree with those authors who believe that the head of the bone is first affected, and the cavity secondarily, and argues that if the affection of this part be not extensive, and being as it were the effect of the caries of the head of the bone, we might hope, having removed the cause, to see the diseased action in this part checked at its commencement. We cannot agree with M. B. in this, and are of opinion that if there be evidence of the cotyloid cavity being affected, that surgeon will best consult his own reputation and the good of his patient who declines interfering. We cannot conceive that the cautery, as recommended in such cases by Briat, or the gouge and mallet, by Morcau, would be of much avail. We ought in justice, however, to add, that in two of the cases related, the cotyloid cavity was unaffected, and that amongst the five successful cases, three were performed for caries involving the articulation.

Northern Journal of Medicine, August, 1844, *p.* 278.

60.—ON ANEURISM TREATED BY COMPRESSION.

By O'B. Bellingham, M.D., F.R.C.S.I., one of the Medical Officers of St. Vincent's Hospital.

[Dr. Bellingham relates two cases of this description. The first was a case of secondary iliac aneurism. The external iliac had been

tied some time previously for aneurism of this vessel, and the man was pursuing his occupation (that of turning a lathe with the right foot) when he perceived a swelling in the iliac region of the right side, exactly in the site of the former tumour. This had all the symptoms of aneurism. At the commencement he was treated by a combination of tartar emetic and digitalis, with low diet. Small bleedings from the arm were also ordered, to the amount of five or six ounces, as the patient could bear them.]

Pressure upon the *distal side* of the tumour, by means of the instrument for compressing the femoral artery in popliteal aneurism, was commenced in about a month; the pad was fixed immediately below the tumour. The patient bore the pressure very well, but it appeared rather to increase the pulsation in the tumour.

May 12th.—The compression has been continued at intervals, but no impression appears to have been made upon the tumour; if any thing the pulsation is stronger. The pad of the instrument was now placed upon the femoral artery in the situation of the coming off of the profunda.

15th.—During the last three days pressure has been kept up pretty steadily, but it has been discontinued at night: the tumour is evidently smaller, its pulsation has also diminished, particularly above and laterally. After a few days the pulsation in the tumour became again more perceptible, the apparatus was consequently removed, and the patient allowed to rest.

Some days subsequently, pressure was applied directly upon the tumour, by means of a compress, adhesive plaster, and bandage tightly bound round the body. After this had been persevered in for some days, the tumour was found to have diminished in size, and it had also become more flat upon the surface; the pressure gave the patient no uneasiness.

27th.—The patient has remained in bed, and has assiduously continued the pressure to the tumour. On removing the bandage and compress to-day, little external swelling was to be seen; the pulsation has also much diminished; below, the pulsation is more evident, but only in the line of the vessel as it passes under Poupart's ligament, and for a very short distance below it.

June 26th.—The patient has been kept as much as possible in the recumbent posture, though he was often found (when I visited the hospital at an unusual hour) walking about the ward. He has continued to employ pressure by means of the compress upon the tumour, and a bandage round the body during the day, relaxing the pressure a little at night. He has taken no medicine of late, and has been allowed full diet. No pulsation can now be detected in the site of the tumour, on the most careful examination; nor is there any external swelling; on pressure we detect the remains of the tumour, which is much shrunk, and is hard and solid to the touch. On placing the stethoscope over this part a feeble bruit de soufflet is heard, this is merely a short whiff, such as would be developed by

pressure upon a healthy artery with the stethoscope. About ten days subsequently this bruit could no longer be heard.

July 20th.—The patient has discontinued the pressure now for upwards of a fortnight, but he has been kept as much as possible in the recumbent posture. Some remains of the tumour can still be detected by pressure over its site, but no pulsation or bruit of any kind can be heard; neither can any pulsation be felt in the femoral artery, from Poupart's ligament downwards. The patient is on full diet, and his health does not appear to have suffered in the slightest degree from the confinement to bed.

August 17th.—No tumour can be now felt; there is merely a little hardness in the situation of the former swelling; no pulsation is perceived in the iliac, femoral, anterior, or posterior tibial arteries; the temperature of both limbs is the same, and the patient says the right is as strong as the left. He was dismissed this day, and cautioned not to use the limb much for a time.

Observations.—This case presents some points of peculiar interest in the history of aneurism of the large arteries. Here was a patient in whom the external iliac artery had been tied for an aneurism of the iliac artery; the aneurismal sac had suppurated, and healed by granulation; the patient was dismissed in perfect health, and had returned to his occupation, at which he continued to work for five months; when, after a hard day's labour, a tumour suddenly appeared in the site of the former aneurism, which gave a heaving impulse to the stethoscope, expanded when the hand was placed over it, during the ventricular systole; could be almost emptied of its contents by pressure, and appeared to be refilled by a jet from an artery when the pressure was removed; in fact which presented every sign of aneurism of the external iliac artery. Yet this patient, by means of rest in the horizontal posture, low diet, occasional bleeding, the internal exhibition of digitalis, and the external application of pressure, was perfectly cured, returned to his occupation, and has remained well since.

It may be urged, that the tumour in this case must have been other than aneurismal, as the external iliac artery was probably obliterated from the point at which the ligature had been applied to the sac of the aneurism, and the latter had suppurated freely; there was no vessel therefore in this situation of sufficient size to which the aneurism could be referred. I shall only observe, that the tumour presented every sign of aneurism of a large artery, and was considered to be such by all the medical men who examined it, the majority of whom gave a most unfavourable prognosis.

If the tumour in this case was not an aneurism, what could have been its nature? It could hardly have been an abscess, or it would not have formed so suddenly, and the matter would eventually have made its way to the surface; nor a tumour of any kind with which we are acquainted, seated over an artery, or it could not have been nearly emptied of its contents by compression; direct pressure would have tended rather to increase than to diminish it; and com-

pression of the vessel upon the distal side of the tumour would not have had the effect of causing a diminution of the swelling, as was observed here.

The great difficulty consists in deciding what vessel was actually the seat of the aneurism; and this difficulty is not at all lessened by supposing the swelling to have been an abscess, or a tumour of any kind lying upon a large artery: certain it is that by means of continued pressure, the tumour disappeared, and the artery which supplied it was altogether obliterated. The case must therefore be regarded as one of those anomalous ones which occasionally occur, and which cannot be explained unless a post-mortem examination enables us to ascertain the exact condition of the parts—which happily was not afforded us here.

Dublin Journal of Medical Science, Nov., 1844, *p.* 245.

[The other case was one of femoral aneurism which was successful. Mr. Syme, of Edinburgh, has made some condemnatory remarks on this mode of treating aneurism. When, however, we see besides Dr. Bellingham the names of such eminent surgeons as Cusack, Hutton, and Kirby, who have thus treated this affection, we think it deserves consideration. Mr. Syme says:—]

It should be kept in view, that the field for resorting to the use of pressure is limited to the femoral artery, as the superior extremity is liable only to traumatic aneurisms, which are best treated by double ligature of the wounded vessel, while the carotid, subclavian, and iliac arteries, are placed beyond the reach of compression. But the femoral artery may be tied with so much ease, so little suffering, and such perfect safety, that the laborious, distressing, and tedious procedure, which has lately been brought again into notice by a surgeon of Dublin, will probably soon return to the obscurity in which it has very properly been allowed to slumber. For my own part, having tied the femoral artery thirteen times for aneurism, and never met with the slightest symptom of an unpleasant nature from the operation, I shall certainly not deviate from the line of practice hitherto pursued.

London and Edinburgh Monthly Journal of Med. Sci., Oct., 1844, *p.* 825.

61.—ON THE OPERATION OF PARACENTESIS THORACIS.

By James Arnott, M.D., Brighton.

Previously to describing what I think would be an improvement on the methods at present in use, it is necessary that I should state my opinion that the entrance of air into the cavity of the chest is not the sole cause of the ultimate aggravation of symptoms, and fatal results, that have so often followed the *immediate* though short relief obtained by paracentesis. In addition to this, I conceive that there is frequently irritation produced by the sudden and forcible

distension of the lung and its investing false membranes, from the ingress of air through the trachea.

To obviate the entrance of air through the trocar into the cavity between the pleura, and the irritation from distension, I would propose keeping the outer end of the narrow trocar in distilled water while the effused liquid is escaping, in order that the water may be sucked into the pleural cavity in the event of the lungs not *easily* yielding to the air admitted by the trachea; and at the same time any entrance of air by the puncture in the skin may be prevented by surrounding the trocar, where it passes through it (the puncture having been made in the manner recommended by Dupuytren,) by some soft adhesive matter. It is long since the idea of placing the patient in a bath occurred to me, but there are many objections to such a plan, which, however, as we learn from Dr. C. J. B. Williams, has been lately successfully employed in Germany. The difficulty which first presents itself in the plan which I have proposed, of keeping the end of the trocar steadily at a small depth in the water, is surmounted by fixing it for the time to the bottom of a shallow vessel connected with another containing a large supply of water, on the principle of the bird-glass—as a teacup or saucer may be supplied with water from a quart bottle inverted in it.

The same purposes might perhaps be as well, if not better, attained by allowing the pus to escape through a trocar, round the outer end of which a bladder has been tied, containing some unirritating and in other respects innocuous gas. And still farther to guard against the sudden expansion of the lung, or stretching of its investing membranes, this gas (azote ?) might perhaps be forced through the trocar at an early period of the operation, so as to occupy the whole or part of the space occupied by the fluid, until it should be removed by absorption. Useful facts in connection with this subject might be established by a very few experiments in comparative physiology.

Were the operation thus divested of the hazard usually attending it, and rendered as safe as the minor operation of opening a common abscess, it would be an easy matter to determine under what circumstances it should be performed. Whenever it was ascertained, by having recourse to the diagnostic means for which we are indebted to Laennec and Avenbrugger, that absorption was not taking place so rapidly as it usually does in cases where the cure is rendered complete by this alone, and where there is consequently danger of loss of function in the lung by its long-continued compression, then would be the proper period for the application of this remedy. If delayed until the lung has become bound down by false membrane, or been made itself incapable of expansion, the mischief will not only be to a certain degree irremediable, but it is questionable whether, under ordinary circumstances, much of the pus could then be removed, unless some such expedient as supplanting it by an innocuous gas were resorted to. And is not the want of expansibility in the lung in many cases of chronic pleuritis a principal cause of the effused fluid being so slowly removed by absorption ? Where the lung is

permanently compressed, the rising of the ribs (if still capable of motion) and depression of the diaphragm will cause a disposition to a vacuum in the cavity of the pleura. Does not the same disposition act injuriously in pneumonia, by producing vascular congestion where the expansibility of the lung is diminished by disease? Supposing that such a gas as has been indicated could be safely injected between the pleura in such quantity as to compress the lung and prevent its motion, in cases of pneumonia, hæmorrhage from, or ulceration of the lungs, where (as is generally the case) one side is only affected, and where it is desirable that the diseased part should remain undisturbed, what would be the effect? In order to reply to these questions there would be a necessity for referring to many yet undetermined points in physiology, and instituting an inquiry incompatible with the purpose of these practical observations. At some future time I shall resume the subject.

Med. Gazette, Aug. 2, 1844, *p.* 598.

[In a paper read before the Medical and Chirurgical Society, Dr. Hamilton Roe denies that danger is to be apprehended from paracentesis thoracis. He has examined 39 cases recorded in the British Journals between the years 1812 and 1842, and found that 11 died. 24 cases have occurred in his own practice, and he states "that the operation was as free from danger as any other performed upon the human body; that most of the evil consequences supposed to attend it are far more imaginary than real; that it is commonly successful when employed at an early stage of either empyema or inflammatory hydrothorax, and the common cause of failure is to be found in the late period at which it is alone regarded as admissible." Dr. Roe further states with reference to the supposed dangers of the operation, that he "had been unable to find one case on record in which mischievous results had occurred; in his own practice no precaution had been employed to prevent the admission of air into the pleural cavity, but no bad results had followed; and even in one case (the only example of the kind), in which the air failed to be absorbed with the rapidity commonly observed, it had been readily withdrawn by means of a syringe, the wound made in tapping the chest having been healed; but, although the accidental admission of air at the time of the operation was never productive of bad effects, yet its continued entrance in those cases in which a fistulous opening had been made into the pleura had very commonly been followed by mischievous results; the author, therefore, was strongly in favour of the complete removal of the fluid, and the immediate closing of the aperture. Although it was difficult to determine what length of time might, without danger, be allowed, for the exhibition of internal remedies, yet, from his own experience, he is induced to believe that in the general class of cases three weeks is the longest period that can with safety be permitted to elapse before the withdrawal of the fluid. In none of his own cases had complete restoration of the lung resulted after it had been subjected to the pressure of pleuritic

effusion for six weeks. It was important to understand rightly the exact state understood by the term "cured empyema," much of the difference of opinion relative to the propriety of tapping the chest depending upon the varied manner in which such expression is employed. Thus, in the posthumous essay of Dr. Hope, a long line of cases of empyema are recorded, in which the continued action of mercury was followed by "cure." In the essay in question, however, it is not stated that in any one case the lung had been restored to its healthy condition. By the early employment of paracentesis, those changes in the pulmonary tissue by which its expansibility is destroyed are prevented, and thus, not only is the removal of the pleuritic effusion effected, but the lung also restored to the full performance of its function."

In this opinion, respecting the operation itself, Dr. Roe is in some measure supported by Dr. Theophilus Thompson, who argues "that puncture of the thorax involves no circumstance of peculiar hazard, provided suitable precautions be adopted." Amongst these precautions he urges "the expediency of repeating the operation in preference to removing a large quantity of pus at once, and especially insists on the conclusive evidence which recorded cases afford, that the practice of leaving a canula in the wound is highly detrimental, in consequence of the increase of pleural inflammation and decomposition of the enclosed matter, owing to the long continued contact of atmospheric air." The following case which he publishes is interesting, as it shows the value of repeated operations, rather than allowing the canula to remain in the wound.]

In the summer of 1843 Dr. Thompson visited, with Mr. Robarts, of Great Coram street, a little boy, between five and six years of age, who had suffered for two months from febrile symptoms. On examining the chest conclusive indications were observed of purulent effusion in the right side, and the operation of paracentesis thoracis was performed on the 27th June. The puncture was made through the fourth intercostal space and fourteen ounces of pus were withdrawn, various precautions being adopted to prevent, as much as possible, the access of air. On the 30th of June the operation was again repeated, and about a pint of matter withdrawn. The relief obtained, although very considerable, proved only temporary; notwithstanding the use of appropriate remedies the accumulation was renewed, and on the 10th of July the operation was performed for the third time, twenty ounces of pus being removed. After the performance of the fourth operation, on the 21st of July, when twenty-two ounces of thick, but not fetid, matter was removed, the boy improved in strength, and the excess in girth of the right side of the chest over the left was materially reduced. On July 28th the puncture, which had been for some days perfectly healed, opened spontaneously, and within twenty-four hours gave exit to about four ounces of pus. After three days the discharge ceased, but above the seat of

the two last punctures a swelling was formed about two inches in length, at the posterior part of which an aperture, discharging matter, appeared. On the 16th of August both openings were discharging; the anterior spontaneously, the posterior when pressed. The local symptoms gradually became more favourable and the general health improved, so that in September the boy was able to walk out. The right side of the chest contracted, and in the month of November was an inch and a half less than the left in circumference. A partial healing of the aperture being followed by some aggravation of the symptoms, it was determined to attempt the gradual emptying of the sac and approximation of its sides. This object was successfully obtained by means of plugs made of sponge, firmly tied with pack-thread, and saturated with wax; matter, which was to the last inoffensive, was thus repeatedly removed from the cavity. The opening healed about the end of January, and the boy has since remained perfectly well.

[Dr. C. J. B. Williams seems to doubt the correctness of the above opinion and the success of the operation in the hands of Dr. Roe. He says that "the result of Dr. Roe's cases was to him altogether a matter of surprise, as the success was far beyond any thing he had seen in his own practice or recorded in that of others." He then makes some practical remarks on the operation which we subjoin. He says—]

Several years since he had performed the operation in a number of cases, and the result had been invariably fatal. This had been the case also with Dupuytren and many other surgeons, and the consequence had been that the operation had fallen into disrepute, and opinion was uniformly against its employment. In all the cases alluded to no attempt whatever was made to exclude the external air, and the canula was sometimes left in the wound. The evil effects were evidently the result of the entrance of air into the chest. He concluded this from the following facts:—The immediate effect of the operation in all the cases was a very decided relief to all the symptoms, and in no case of pure uncomplicated empyema was the fluid first drawn off in any way fetid, and in addition to the immediate relief the patients seemed as if they would do well. In three or four days, however, symptoms of irritative fever came on; the pulse became quicker; the patient was affected with night sweats; became cachectic: and died. Now, it was invariably found that the discharge from the wound, whether of pus or air, became more and more fetid as these symptoms progressed; and, indeed, one condition seemed to bear so complete a relation to the other, that he had no doubt that the cause of both was the same, and that this was the entrance of the air. He had observed this sympathy, particularly in adults, the exceptions to it being in children, in whom, when the discharge and air from the wound were fetid, the constitution did not always appear to suffer in the same degree. It seemed, indeed, that there was greater power in the child than in the adult to resist the

noxious influence of decomposed pus. Fully impressed with the truth of these remarks, in all subsequent operations he had adopted measures for the exclusion of air, and in none of these did the fetid condition of pus come on, nor did any irritative fever occur. He would now inquire whether the operation was an expedient one? and reply to that question by saying that it was not so frequently necessary as had been supposed, and he thought that by-and-by most practitioners would agree with Dr. Stokes that it ought not to be resorted to, except in cases in which there was pus in the chest. It might be difficult in some cases to decide whether the effusion were purulent or not, previous to the exploration of the chest, or of the performance of the operation; but generally, he thought, the hectic fever, the frequent pulse, and other constitutional symptoms, might decide the question. In such cases, then, when the symptoms were aggravated, when the dyspnœa was urgent, and life itself threatened, he should resort to the operation. When these urgent symptoms, however, did not obtain, and there was reason to think the fluid to be serous, he should be inclined to wait for the effect of remedies. He spoke thus from experience, for within the last few years he had seen many cases (in which, years before, he would have advised an operation) where the oppression of breathing and constitutional disturbance had given way under the influence of tonics and slight stimulants. He related the case of a lady in whom there was effusion into the pleura, accompanied by much constitutional debility. Antiphlogistic remedies, with mercurials, were employed, without benefit, and she seemed to be sinking from the affection. He was called in. It was evident that the system required support; tonics and slight stimulants were accordingly administered, and from that moment the constitution began to rally, and she eventually got quite well. We did not, he thought, sufficiently consider the fact, that effusion often depended on the low state of the circulation, and that as the strength increased the effusion diminished. Two objects were sought to be obtained in the operation of paracentesis,—the removal of the liquid, and the prevention of the ingress of air into the chest; the air irritated and kept up the effusion, and, he believed, by pressure, prevented the expansion of the lung. With the view of preventing this accident, he had practised, and recommended the employment of, pressure on the parietes of the chest, which pressure should be continued as long as the liquid was allowed to flow. By this means alone it was easy to prevent the entrance of air into the pleura, but other measures had also been employed to obtain the same results. Thus, it had been recommended that the patient should be placed in a bath during the performance of the operation, so that if anything did enter the cavity of the chest it would be water. This plan was said to have been successfully employed in Berlin. Another plan was, the employment of an instrument with a valve, which, while it prevented the entrance of air, allowed the exit of fluid; but this instrument was liable to be blocked up by the matter. Again, it had been advised that the intestine of a rabbit, or small animal, should be attached

to the canula, that the intestine should be placed in water, so that the air would be kept out, and the fluid allowed to ooze out. This plan had the advantage of allowing the wound to be kept open for a long time, and of preventing the necessity of a second operation. The case, however, by Dr. Theophilus Thompson, proved the value of repeated operations over that of emptying the chest at one operation.

[It seems that Dr. Roe's opinions agree with those of most other gentlemen, when the operation is performed, and the canula left in the wound. But the success which he met with, as far as the operation was concerned, was mainly to be attributed to the fact that when he had abstracted as much pus as he could, he withdrew the canula, and closed the wound, thus preventing the continued entrance of air through a fistulous opening. In the case reported by Dr. Theophilus Thompson, one would have felt disposed, following the old method in such cases, to leave the canula in the wound, or at any rate to have kept the wound open, instead of repeating the operation every few days; but if this practice had been pursued, it is very likely that death instead of recovery would have ensued. We know that in many cases of hydrothorax, when a fistulous orifice is made in the chest, the effused fluid, which is at first serous, becomes purulent, and a severe form of disease comes on. Respecting the admission of air into the chest during the operation, we certainly think the evidence is in favour of the opinion of Dr. Roe, who on this subject, and respecting some of the opinions held by Dr. Williams, says—]

The strongest evidence against the old opinion quoted by Dr. Williams, was to be found in the cases related in the paper, in every one of which air entered freely during the time of the operation, yet did no unpleasant effects ensue. He had frequently found the pleural sac immediately afterwards filled with air, producing all the physical signs of pneumothorax, but that a few hours had sufficed for its removal by absorption. He had been surprised at the observation made by Dr. Williams, to the effect that air, admitted into the pleural cavity, was capable of exerting the same amount of pressure on the lung as the fluid previously contained. Experience completely disproved the correctness of the remark, and the observations of Mr. Arnott and Mr. B. Phillips strictly coincided with the results obtained by himself, that the air admitted during the operation had commonly been removed within a few hours. With regard to the fatal termination of the cases that had occurred under the observation of Dr. Williams, there could be little doubt that their unsuccessful issue was not in any way dependent upon the mere admission of air into the chest, but that the cause was to be sought for in the period at which the operation had been had recourse to. It had long been the opinion of authors that paracentesis could only be regarded as a *dernier ressort*; and if the cases alluded to by Dr. Williams had been treated in accordance with such views, it was not remarkable that no recoveries should have taken place. In all cases in which the operation had been long deferred, the lung had become so much compressed

and atrophied, and its investing pleura so thickened, contracted, and bound down by morbid adhesions, that its future expansion could not take place; and though the collection of fluid might be removed, the lung would be wholly lost as an organ of respiration. If, however, the practice he had advocated were adopted,—if the operation were had recourse to at the only period at which it was really of value as a curative means,—if it were employed to remove a disease rather than to protract it, very different and far more gratifying results would ensue. Dr. Williams had also stated that the majority of cases of hydrothorax were to be cured by tonics, and that, therefore, the operation of paracentesis was unnecessary. He (Dr. Roe) dissented not only from the assumed fact, but also from the inference deduced; he did not deny that many patients got rid of pleuritic effusions by the use of tonics, after depletory measures had been too actively employed, and that such persons did recover without the operation, but the fact was not less true that a large number of patients died annually from hydrothorax, even after the employment of all those remedies commonly relied upon as useful in the treatment of this disease. In few, if any, of the twenty-four cases had the operation been employed until other remedies had been unavailingly had recourse to. In reply to the prophetic remark of Dr. Williams, that the operation of paracentesis would cease to be employed in the treatment of hydrothorax, he was fully convinced that it was only required to regard the operation in its true character, as a curative measure, to demonstrate the incorrectness of the opinions which had served to surround this operation by unreal dangers, and to show, by the record of cases, that it could be almost without an exception successfully (when early) employed. He believed that it would then meet with general adoption, and a very few cases would be met with in which it would be found inadequate to the complete removal of the disease. In the course of his paper he had especially directed attention to the greater value of paracentesis as a remedial measure, inasmuch as, by its timely employment, not only was the effusion itself removed, but it also relieved the lung from the pressure exercised by the surrounding fluid, by which its proper structure was ultimately destroyed, and its subsequent expansion prevented.

Lancet, May 4, 1844, *p.* 198.

Mr. Snow lately exhibited to the Medical and Chirurgical Society, an instrument of his invention for paracentesis of the thorax without the admission of air or atmospheric pressure into the pleura. It consisted of a trocar and a double-action syringe, with two distinct valves, like the stomach-pump. The canula had a stop-cock and a brass cylinder attached to it, and the trocar, which was ground to fit the cylinder accurately, passed through the open valve of the stop-cock. In withdrawing the trocar from the canula after perforating the chest, it was to be brought so far as to be clear of the stop-cock, which point was indicated by a mark on the trocar, and then the stop-

cock was to be turned before the complete removal of the trocar. The canula could now be connected with the pump by means of an elastic tube, the tap re-opened, and the contents of the pleura emptied through the pump; the integrity of the thorax as a pneumatic apparatus being preserved through the operation. Before introducing the trocar, the skin should be drawn a little from its situation, and then, by withdrawing the canula slowly at the end of the operation, the correspondence between the superficial and deeper part of the wound would be lost before air could enter the pleura. The instrument had been manufactured by Mr. Read, of Regent-circus, for Mr. Snow, between two and three years ago. In addition to the advantage of not admitting air into the pleura, this instrument allowed the patient the use of both his lungs during the operation, a circumstance which would extend the operation to some cases in which it would otherwise be impracticable.

Lancet, June 8, 1844, *p.* 358.

62.—ON LITHOTOMY.

By James Syme, Esq., Professor of Clinical Surgery in the University of Edinburgh, &c.

Notwithstanding the diversity of opinion at present existing on the subject, and the conflicting statements of experienced writers, I am persuaded that all successful operators have made their deep incision nearly to the same extent, and that the apparent discrepancy between their directions proceeds merely from the careless use of language suggested by the impressions under which they wrote. I have been led to this conclusion, in the first place, by ascertaining that there is a part at the neck of the bladder which *must* be divided, in order to allow the extraction of even a small stone, without inducing fatal inflammation of the bladder; and that if this part be divided, additional space is readily obtained through dilatation by the finger, the remaining part of the prostate tearing in the direction it is cut,—the mucous membrane of the bladder stretching,—and the fibres of its muscular coat separating from each other; and secondly, by finding that the various forms and modes of incision which have been recommended on the ground of success, when carefully considered and compared with their contexts, are calculated to produce this effect. The part I mean is that which is usually called "the neck of the bladder," which opposes the final resistance to passing a catheter, which gives the feeling of a ring when the finger is introduced through it, and which seems to be the most sensitive portion of the urinary apparatus. When catheters or bougies reach this point, sickness and fainting frequently betray its peculiar sensibility of irritation; and when the stone presses upon it, the patient suffers an agony that characterizes his complaint. I believe that leaving this ring entire is the most dangerous error which can be committed in performing lithotomy. It results either from the misleading

influence of such statements as, "the less that is cut, the greater will be the patient's safety,"—"the success in lithotomy is in the ratio of the force employed to extract the stone,"—"the acme of excellence I believe to consist in cutting nothing," or from inability of regulating the instrument employed, so as to cut the extent desired.

In operating with a curved staff, it is very difficult to know how far the knife cuts when it is run along the groove. The perineums of different people vary so much in the proportional size and relative distance of their component parts; and the instrument is so apt to have its direction changed by movements of the patient, or of the assistant's hand which holds the staff, that the incision cannot be regulated as in other operations, where it is guided by sight or touch.

Mr. Cross, of Norwich, has declared his conviction from what he personally witnessed, that Mr. Martineau did not cut nearly to the extent he has described in publishing his 84 cases, of which only two proved fatal. But if a surgeon so experienced cut less than he intended and supposed,—is it not possible that others may have unconsciously exceeded the bounds prescribed by them? At all events it must be admitted that except in the hands of those, not always the most distinguished members of their profession in other respects, who acquire the trick or knack of operating with them, a straight knife and curved staff are very uncertain means of executing the prostatic incision.

In a former number of the Monthly Journal, I advised the use of a straight staff introduced through the wound of the perineum, as a guide in cutting the prostate, and I have now to propose a knife which promises to obviate all risk of error in making the incision through this part. It was suggested to me by the case of a respectable citizen here, on whom I had occasion to operate. He was corpulent to an extreme degree, and possessed a perineum of extraordinary depth, as well as brawny firmness. The stone was removed with success, but I did not feel satisfied with the operation, from finding that in such circumstances the means employed were not adequate to effect division of the prostate with facility and accuracy. With the view of rendering the process more certain, I carefully reconsidered the subject, and made many trials upon the dead body, with the result which is here described. It is a triangular shaped knife, straight and blunt on the back, for running in the groove, and sharp on its convex edge from the point half-way backwards to the extremity,—the remaining part being blunt but thin. If this *prostatome* be pushed along the groove of the straight staff until the blunt part is arrested by the prostate, it will sufficiently divide the neck of the bladder,—and if the operator forces it farther onwards, or even into the cavity of the bladder, no harm can result, from the blunt part of the edge merely anticipating the dilatation which must otherwise be effected by the finger.

Lond. and Edin. M. J. of M. S., Aug., 1844, *p.* 642.

[Dr. Alfred Post, surgeon to the New York Hospital, has written the following paper on this subject, in the New York Journal of Medicine and Surgery.]

The operation of lithotomy has always been justly regarded as one of the most formidable in surgery. The dangers of the operation are to be chiefly ascribed to one of two opposite causes, viz., an incision into the bladder of too great or of too small extent. If the incision be too extensive, or, in other words, if it be carried beyond the bounds of the prostate gland, there is danger of hemorrhage from the prostatic plexus of veins, and of urinary infiltration into the sub-peritoneal cellular tissue of the pelvis. Death may ensue from either of these accidents. If the incision extend much beyond the limits of the prostate gland, it may even involve the internal pudic artery. If the incision be too small, the laceration and contusion to which the neck of the bladder and the prostate gland will necessarily be subjected during the extraction of the stone, will be likely to give rise to severe and even fatal inflammation. To ensure an incision of a definite size into the neck of the bladder, within the limits of the prostate gland, is one of the great desiderata in the operation. In the ordinary mode of operating with a bistoury, the extent of the incision into the neck of the bladder is a matter of much uncertainty, as the incision is made with a narrow instrument, at a considerable depth from the surface, and beyond the view of the operator. To make the incision of a definite extent, cutting gorgets of different forms have been contrived, and there could be no question of the superiority of these instruments to the common bistoury, if they could be conducted with certainty along the groove of the staff into the bladder. But from their breadth, there is much more difficulty in guiding them safely into the bladder, and there is danger of their slipping so as to wound the internal pudic artery, or the rectum, or to penetrate into the cellular tissue between the bladder and rectum, or even into the peritoneal cavity. Great caution is, therefore, required in the use of these instruments; when they are guided by skilful hands, they may undoubtedly be employed with safety and advantage, but without suitable caution, their use is very dangerous. The Prostatic Bisector of Doctor Stevens, which acts on the principle of a double-edged gorget, has the advantage over the common cutting gorget, that it cuts on both sides of the prostate gland, and thus secures a larger opening into the neck of the bladder without any additional hazard to the patient. But the principal objection to the common gorget, viz., its liability to slip, applies also to Doctor Stevens's instrument, although from its introduction along the median line, the danger of slipping is not so great as in the lateral operation. But from the breadth and thickness of the instrument, considerable force is required to conduct it into the bladder, and it is liable to slip into the cellular cul-de-sac between the bladder and rectum. This accident happened to myself in one instance, in operating with this instrument upon the dead subject; the beak of

the instrument slipped from the groove of the staff, and entered the bladder behind the prostate gland, and between the vesiculæ seminales. I removed the stone through the opening thus made, and only detected the accident on a subsequent dissection of the parts.

To obviate the inconveniences and dangers attending the modes of operating which have hitherto been resorted to, I have devised a new method, which I venture to lay before the profession. The method to which I allude is a modification of the bilateral operation. I propose to make an external crescentic incision through the perinæum on both sides of the median line, the concavity looking toward the anus, according to the method described by Celsus, and performed in modern times by Dupuytren, of Paris, and by Doctor Stevens, of New York. I then make a free incision into the membranous part of the urethra, upon a grooved staff, after which the staff is withdrawn, and the remaining part of the operation is performed with a new instrument, which I have contrived for the purpose, and which is designed to guard against the uncertainty and danger attending the use of the instruments which have hitherto been employed. My instrument consists of a straight steel rod, eleven inches in length, and of the size of a bougie No. 1, having a flat ivory handle at one extremity, and a small rounded button at the other extremity. Over this rod slides a canula of the size of a bougie No. 10, and half the length of a rod. The distal extremity of the canula is tapered off to the extent of three quarters of an inch, so as to form a beak which projects beyond the blades; immediately behind this beak, are two blades, which are inserted into grooves on the sides of the canula, in such a manner that they can easily be taken out and reinserted. There are four sets of blades of different breadths; the largest make an incision into the neck of the bladder of about one inch and a half in width, and the smallest about three quarters of an inch. The proximal extremity of the canula has a small ivory handle adapted to it, by means of which the canula is made to slide upon the rod. The incision into the membranous part of the urethra having been made, as already described, the extremity of the rod is passed through it into the bladder, the canula being drawn back towards the handle of the rod; the beak of the canula is then passed along the rod into the urethra, and is thus conducted into the bladder, the blades making an incision of a definite extent on each side of the prostate gland. By the use of this instrument, a degree of certainty is attained as to the situation and extent of the opening into the bladder, which cannot be acquired by the employment of any other instrument. It appears to me, therefore, that this method of operating must be simpler in its execution, and safer in its results, than any other method. I have not yet had an opportunity of testing the operation upon the living subject; I have tried it upon the dead subject, and have found that it makes a very satisfactory incision into the neck of the bladder.

New York Journal of M. and S., March, 1844, *p.* 186.

[In a case admitted into the Newcastle Infirmary, Sir John Fife operated as follows.]

After passing the usual grooved staff, he made his first incision after the method of Dupuytren, from ischium to ischium, arching over the anus, the convex side of the centre of the incision passing close under the back of the urethra, he soon reached the staff, and then passed his knife into the bladder, according to Liston's plan, dividing only a small portion of the prostate. Uncommon difficulty was experienced in grasping the calculi, the larger one being of an oblong form, and pendulous from the fundus of the bladder, to the lining membrane of which it was firmly attached. The smaller calculus rolled towards the neck of the bladder and often eluded the forceps, but was eventually caught and extracted.

An elastic gum tube was introduced through the wound into the bladder by Sir J. Fife, according to his usual practice. The patient is already convalescent.

Sir John Fife's reasons for departing from the ordinary mode of operating are, first, to avoid the artery of the bulb; second, to protect the rectum by the more satisfactory interposition of the left forefinger; thirdly, to open the urethra further back, and close to the anterior edge of the prostate; then again, he prefers Liston's mode of opening the bladder to that of Dupuytren's, alleging that it is more satisfactory to a surgeon to dissect his way by recognizing each fibre he divides, than to assist himself by any mechanical contrivance like the bistourée cachée, besides the objection to a double incision into the prostate, when a single one, half through, may suffice.

Sir J. F. considers this new mode of operating more adapted to adults than children, but promises to give to the journal the results of further trials. Certainly in this instance the loss of blood was very trifling, and not even an oozing was perceptible after the operation.

July 31st. Doing well; slept most of the night; has a little pain in the abdomen, but nothing to make him complain of; urine passes through the tube; has pain in the glans occasionally.

August 1st. Doing well; no more pain in the bowels which have not been open since the operation; rests well; tube loosened and left to find its way out. A purgative draught immediately.

August 2nd. Bowels moved well; no pain nor uneasiness; wishes to go home; tube come away, and urine flows freely by the wound.

August 3rd. Doing well; bowels not open; no pain in the abdomen or glans; rests well.

August 4th. Wound looks very well. A purgative draught immediately.

August 5th. Going on very well. Goes out on Thursday.

Prov. Med. Journal, Aug. 21, 1844, *p.* 320.

63.—ON THE EXTRACTION OF OVARIAN CYSTS.

By Benjamin Phillips, Esq., F.R.S., Assistant-Surgeon to the Westminster Hospital.

In a paper read before the Medical and Chirurgical Society, Mr. Phillips brings together the results of these operations, for the purpose of determining whether the plan of treatment is to be regarded as a benefit conferred on humanity or not.

Extirpation of ovarian cysts has been practised, as appears from the tabular arrangement of the cases, at least sixty-nine times. In fifty cases the tumour was extracted; in fourteen cases adhesions or other circumstances prevented its removal; in five instances no tumour was found.

Of the cases in which the operation was completed, the tumour being extracted, thirty terminated favourably, the patients recovered; in twenty instances the termination was unfavourable, the patients died.

Of the five cases in which no tumour was discovered all recovered. Of the fourteen cases in which adhesions or other circumstances prevented the extraction of the tumours, eight recovered, six died.

The proper way, therefore, according to the author, of looking at this plan of treatment is, to observe the number of cases submitted to operation, and the number of recoveries after the removal of the tumour. He conceives this to be the fair way, because what has happened already is likely to happen again. Adhesions may be too strong and extensive to make removal prudent, the tumour may be other than ovarian, or it may be that no tumour can be found. Regarded in this light, it appears that the operation has been undertaken sixty-nine times, and that in thirty instances the patient has recovered after the extirpation of the tumour. It is true that forty-three patients survived gastrotomy; but many of them were subjected to such a painful operation, on the one hand, without necessity, and, on the other, without being disembarrassed of the disease.

Two different plans have been followed in the operation; and it is proper to ascertain whether there has been a corresponding difference in the results. In the one plan, the incision of the abdominal parietes is sufficiently extensive to admit of the removal of the tumour entire; often extending from the ensiform cartilage to the pubes. In the other plan, the incision has had the extent necessary for the removal of so much of the tumour as would not escape through a puncture or incision made in it before the extraction was attempted. If the tumour contains little or no solid matter, a puncture might cause the complete evacuation of the contents, and the cyst might be removed through a very small opening. The author thinks the evacuation before extraction, and not the exact length of the incision, the important distinction between the two operations.

The principle of extraction entire has been followed in forty-four

instances: the instances of successful removal by this plan amount to eighteen. The cases in which the plan of procuring the evacuation of as much as was practicable of the contents of the tumour before the extraction of the tumour was attempted, amount to twenty-five; the instances of success to twelve.

The evidence is, then, directed to the consideration of the following points:—

1st. Can we determine with certainty whether a tumour be ovarian or not? If not, have the failures been so frequent as to constitute a reason why the operation should not be attempted?

2nd. Supposing a tumour to exist, and to be ovarian, can we ascertain the nature of its contents, as well as its connections? If not, have the failures been so many as to be an objection to the adoption of the operation at all?

3rd. Are the results of this plan of treatment sufficiently favourable to justify us in preferring extirpation to any other mode of treating ovarian tumours? If so, what plan of operation promises most success?

The general materials, together with the circumstance that the author has been present, either as principal or assistant, in six of the operations, have given him peculiar facilities for fairly considering those questions; and the conclusions he comes to are, that we have not the means of determining with absolute certainty whether a tumour be an ovarian cyst or not (though he thinks the chances of error ought not to be so large as is represented by the tables); that we have no sure means of ascertaining the contents and connections of tumours presumed to be ovarian. After an elaborate consideration of the third question, he says, "the aspect in which the question should be ultimately regarded is this—the circumstances of the patient's case are so pressing that relief must be afforded; and, as all other means have failed, it must be by an operation. Tapping is usually a successful operation; so far, at least, as to afford immediate relief; and, in an ordinary case, the patient may reasonably expect to live four or five years; not in comfort, it is true, but requiring relief three, four, or more times, it may be, in a year. Extraction, though not a very painful, is a dangerous operation: the experience we possess justifies us in the expectation, that in at least forty-three cases out of every hundred the tumour may be extracted, and life saved; but at the same time it must not be concealed, that out of the sixty-nine operations to which reference is made, twenty-six died, and that soon—in fact, in a few days.

If the results already stated should be held to justify the performance of the operation of extraction in cases of ovarian tumours, it is incumbent upon us to select the operation which is least painful and perilous to the patient. It must be borne in mind that the plan of making such an incision as would admit of the extraction entire was employed in forty-four cases, and that the recoveries after extraction amount to eighteen cases. The plan of making such an incision as would admit of the extraction, when as much as possible

of the contents were removed, was followed in twenty-five cases, of which twelve recovered after extraction. The proportion of recoveries being in the one case 43, and in the other 48 per cent. The author's own experience is much more favourable, being five out of six.

It is evident, therefore, that the preponderance of success is in favour of what is termed the minor operation, that is to say, an operation in which the incision is as small as is consistent with the easy removal of an inflated cyst, provided it be large enough for the convenient application of the ligature around the pedicle.

Medical Gazette, July 5, 1844, *p.* 473.

[Mr. Isaac Brown brings forward several cases of ovarian dropsy which were cured without the severe measures lately had recourse to. Mercurials, diuretics, tonics, and *tight bandaging*, followed by tapping, constituted his chief points of treatment, which he illustrates by four cases. These, however, were young and unmarried females, in whom the powers of nature are more vigorous. In the first case, Mr. Brown had the opinion of Dr. Locock, Dr. Bright, and other eminent men, who all concurred in the opinion that it was ovarian dropsy. The tumour gradually increased in size, and fluctuation became very distinct. Mr. Gibson, of Halstead, Essex, was now consulted in consequence of his having had three such cases, which he had treated successfully. Mr. B. says]

The result of our consultation was that she should commence that form of treatment which Mr. Gibson had found successful, viz., mercurial friction over the abdomen, with flannel bandages *tightly* applied; mercurial alteratives and steel medicine, composed of sulphate of iron, diluted sulphuric acid, tincture of hyoscyamus, distilled water, until the catamenia became regular; then, continuing mercurial friction with bandaging, to commence diuretic and tonic medicines, composed of—

℞ Acetate of Potass, five drachms; Spirit of Juniper, one ounce; Tincture of Squills, one drachm; Compound Infusion of Gentian, six ounces; Water, to a pint. Mix. Three tablespoonfuls twice or three times a day, and blue pill with opium, &c., continued till slight ptyalism was apparent.

This treatment was commenced in August, 1842, and continued, with slight intermissions, till February 1, 1843. It was particularly observed after the first few weeks that the size of the body, which had been thirty-four inches and three-quarters over the tumour, had decreased nearly an inch, but from leaving off the mercurial friction it again increased to the same extent, and was not afterwards reduced, but remained at the same size; hence I infer that the secretion of the water was influenced by the treatment.

The rubbing having been discontinued in February, and the size of the body not increasing, it was considered a favourable time to

operate for the removal of the fluid; the health was good, but spirits low; the difficulty of walking up stairs or any ascent was great and discouraging, so much so that she could seldom be persuaded to attempt it; she was most anxious to have any operation performed that might relieve her from the annoyance of the disease, and restore her to society.

March 24.—The operation of tapping was performed in the usual way, by placing the patient on the edge of the bed, passing a towel around the body above the cyst, and gently tightening it as the water escaped through a common trocar introduced midway between the umbilicus and pubes, with the point of the instrument bearing to the left side; the cyst was pressed towards the median line, and steadily kept there throughout the operation. The fluid escaped very freely, and was of a clear yellowish colour. After the removal of the fluid the patient became faint, and some sal volatile was given her. Napkins were then folded in a square form, and placed one over the other, so as to make a firm pad, and then applied over the cyst, and *very tightly bandaged* down with flannel; a pill, composed of calomel, two grains, and opium, one grain, was given. She was placed in bed, in the recumbent posture, on her back, and allowed a little tea and toast, with simple gruel diet. On measuring the fluid it was found to be exactly eleven pints.

25.—The patient passed a good night; voided her urine freely; pulse quiet; tongue moist; no fever; no pain in her side, but some uneasiness; more napkins were doubled and placed over the first bandage, and then *firmly* bandaged down, so as to make two sets of pads and bandages; still to keep in the recumbent posture. Ordered a little roast chicken and toast-water. Patient cheerful; she can now breathe freely. Ordered to apply mercurial friction to the inside of the thighs, and to take

> Acetate of potass, five drachms; Tincture of Squills, one drachm; Spirit of Juniper, one ounce; Water, a quart. Mix. Three tablespoonfuls three times a day.

26.—Still progressing favourably; *bandages made tighter;* same diet; appetite remarkably good; urine voided easily, and had a free dejection from the bowels without aperient medicine. Mercurial friction and medicine continued.

27.—Progressing favourably; removed for a short time to a sofa; bandages still kept on. Medicines, &c., continued.

29.—The patient still progressing favourably; allowed sherry and water and animal diet once a day. Medicine continued, with the addition of the comp. infusion of gentian. She was allowed to walk about a little, and in a fortnight from the operation walked round the garden. She appeared to have no complaint with the exception of weakness. The diuretic and tonic medicine was continued with the mercurial friction for six weeks, when she came to town perfectly well, in excellent spirits, without pain or enlargement in her side, and able to take a long walk without fatigue. She travelled into the

West of England, afterwards spent a few weeks at the sea side, and then returned home with renewed health and spirits, and from that time to the present has had uninterrupted good health; rides on horseback for hours together; walks long distances without ever feeling more than usually tired; the catamenia are quite regular. Thirteen months having elapsed since the patient was under treatment, we may fairly consider the cure complete.

The second case is that of Mary M., residing in a country village fifty miles from town, in service as housemaid, aged twenty years. On examination a large ovarian cyst was distinctly felt, with distinct fluctuation. She was ordered mercurial friction over the abdomen, and flannel bandage *tightly applied*, and to take the following medicines for six weeks :—

℞ Blue Pill, one drachm; Opium, six grains. Make into twenty pills, two to be taken night and morning.

℞ Carbonate of potass, one drachm; Acetate of potass, four drachms; Spirit of Juniper, four drachms; Tincture of Squills, one drachm; Water, to eight ounces. Mix. Three tablespoonfuls twice a day.

After the first ten days some comp. infusion of gentian was added to this mixture.

June 22, 1840.—The patient was tapped as described in Miss C.'s case, and twenty-two pints of fluid drawn off. The treatment was continued for six weeks after the tapping. She has had no return of the disease up to the present time, and is now perfectly well, *three years and a half* since treatment.

The next case is that of Sarah G., living in a country village, nineteen years of age. She had been ill for some months previously to applying for medical advice, when she commenced the same plan of treatment as Mary M., and after six weeks, on May 22, 1828, she was tapped, and twenty pints of fluid drawn off, of a *green colour*. *Tight bandaging* and other medicines continued for six weeks afterwards.

On September 2, 1843, fifteen years after the operation, I visited her, and learnt the following facts :—"That for some years after the operation she did not feel quite well, yet in three years she married; has never been pregnant, but the catamenia have been quite regular, and she has of late years been quite well; she states that the colour of the fluid was quite green, and stained the boards of her bed-room, and she has never been able to wash it out, nor from her petticoat, which was also stained, although she has boiled it several times. This patient was in robust health, and was gleaning in the wheat fields, where I found her, and ascertained the above facts.

The fourth case is that of Hannah M., ætat. 17, also residing in a country village. On the 21st of November, 1814, she was tapped, after undergoing similar treatment as the foregoing. This case unfortunately was not noted at the time, but it was in all essential

points similar to that of Mary M. She was perfectly cured, and for some years lived in the neighbourhood ; having since removed I could obtain no clue of her so as to collect more certain data.

Before I speak more fully of these cases, and of their treatment, I will briefly mention another case where the remedies were of the same character, and applied to a patient in the middle period of life, the result of which will, I think, clearly prove that the treatment is capable of controlling the progress of the disease.

Mrs. S., ætat. 45, living in Paddington. For about eight months previously to having advice she had been out of health, and had observed an enlargement of the right side, but did not heed it much till her attention was more particularly directed to it by her neighbours. The uneasiness was at first slight, but soon increased, more especially when called on to exert herself ; it had increased so much, however, by the early part of January, 1843, and she became so ill, that she consulted me. The prominent symptoms of her case at that time were as follows :—

Great depression of spirits and vital energy, with tendency to sopor ; stomach irritable, and the exertion of vomiting produced great pain in the right side ; bowels very constipated ; urine scanty and high coloured, but the desire to micturate very frequent ; distressing palpitations of the heart ; severe pains in the loins, extending down the back and right thigh, and round the crest of the ilium to the pubes ; numbness of the right leg ; considerable pain on pressing the lower part of the right side. On more carefully examining this point there was a distinct swelling to be felt, circumscribed, and fluctuating, extending as high up as the false ribs, but hardly passing the median line. The girth of the belly over the tumour was exactly *thirty-six* inches. She could neither stoop nor walk without difficulty, and the back was the only part she could lie on. Reclension on the right side was, if anything, more tolerable than on the left. Such was the train of symptoms which led me to consider this a case of ovarian dropsy.

The treatment was as follows :—Locally, mercurial frictions and *very tight bandaging ;* generally, the exhibition of mercury until the system was brought under its influence, an alternation of tonics, diuretics, purgatives, (chiefly cathartics) and sedatives. The result of this treatment, at the end of the first month, was an improved appetite, a less irritable stomach, spirits more buoyant, drowsiness less, could stoop, and was enabled to lie on her side for a few minutes. No apparent diminution of the tumour.

Second month.—A further improvement of the general health ; could now sleep on her side ; circumference of abdomen three inches less ; tumour to be felt considerably lower down in the iliac fossa, and within the median line.

Third month.—General health but little impaired ; could, with but slight inconvenience, perform her household duties, and take her ordinary exercise ; the bowels were more inclined to act spontaneously ; the desire to micturate was not so incessant, at the same

time the quantity of urine voided was greater. The circumference reduced still further by another inch and a half.

At this time, January 26, 1844, she gives the following account of herself:—"I am as well as ever I was (a little older of course). I can rub my table, fill my coal-shoot, and walk fast and far. I eat well and sleep well; in fact, I can only say I am in good health, and my side gives me no sort of uneasiness."

Her girth is now thirty-one inches five-eighths; no apparent difference in the outline of the two sides; there is, however, a round body to be felt, but it is low down.

I did not in this case consider it advisable to tap the patient, as her recovery was satisfactory from beginning to end, and I could have gained no real advantage by attempting more. I have no doubt, however, that the disease was ovarian dropsy. I consider it an important case in further developing the utility of medical treatment.

I will now allude more particularly to the *principal* points of treatment which I have mentioned in the foregoing cases. I shall divide it into constitutional, local, and treatment after tapping.

1. Constitutional.—Mercurials administered internally, as alteratives, and externally by friction over the abdomen, and continued till the gums are slightly, yet decidedly affected, and this affection must be continued for some weeks. I lay particular stress upon this point. At the same time diuretics must be given, and after the first week tonics should be combined with them. The food should consist of light animal diet, and should be unstimulating, and the patient should take daily exercise in the air.

2. Local treatment.—The careful and constant application of *tight flannel* bandaging, so as to procure considerable pressure over th tumour. When it is proved that the abnormal action has been checked by a positive decrease of the tumour, and a continuation of such decrease, or by a positive *non-increase* for some weeks, then the cyst should be tapped, and all its fluid evacuated.

3. After-treatment.—Accurate padding and *tight* bandaging over the cyst and body generally, for two or three weeks after tapping, and the medicine and friction continued for at least six weeks. I would particularly wish to enforce the importance of the after-treatment, as on that depends, very much, the success or failure of the case.

The late excellent surgeon, Mr. Walker, of St. George's Hospital, some years since, tapped a young lady in the New-road, and considered the case successful, as no return of the water was apparent for two years, when the cyst suddenly filled, and the patient was as bad as before he operated.

It may, and probably will be argued, by many that these cases were not truly *ovarian*, and thus endeavour to do away with any merit that would otherwise arise from the treatment; but I would draw attention to the *facts*, more particularly of the first case. I saw the young lady when the tumour was very small and deeply

seated in the iliac fossa. I watched its growth from time to time, and distinctly marked its circumscribed edges and felt the fluid when it was first rising out of the pelvis; and, moreover, my friend, Dr. Locock, whose experience in such cases is much greater than my own, at once pronounced it *ovarian*, as well as all the other eminent men who saw the patient. There can, therefore, I apprehend, be no doubt as to its character, nor do I think, when coupled with the succeeding cases, can there be any fear of its permanent cure.

Now, if these facts be established, as I feel they are by four cases, then I do think that before any serious operation is had recourse to this treatment should be tried (for it is evident no harm could accrue from its adoption); and I would say to a patient applying to me, in the very opposite terms of Dr. Elliotson—"I advise you to try medicinal treatment (as I am convinced of its efficacy) before subjecting yourself to the danger of any operation."

It is evident from the nature of the remedies, mercury and pressure, that they act by producing absorption, and, therefore, if Dr. A. T. Thomson's theory be correct, that no absorbents exist in ovarian cysts, have we not here another proof that the veins act as absorbents? But whether the absorption extends to the substance of the cyst itself, or not, I have had no means of ascertaining after death.

Lancet, May 4, 1844, *p.* 180.

[We would here refer the reader to some excellent remarks "On the Pathology and Treatment of Ovarian Diseases," by Dr. S. Jeaffreson, in the Medical Gazette, August 16, 1844, p. 645; August 23, p. 696; October 3, p. 80; and October 25, p. 102. This gentleman has drawn up a table of the cases which have hitherto been published, and at the end of it makes the following remarks. He says:—]

Thus it would appear from the foregoing table, that the removal of ovarian tumours has been attempted in 74 cases, with the following results:—

In 37 cases the tumour was removed, and the patients recovered.

In 24 cases the operation was followed by the death of the patient: of these 24 fatal cases, the tumour was removed in 14, could not be removed on account of adhesions in 6, and was found to be other than ovarian tumour in four cases.

Thus, again, in 74 cases in which the operation for extraction of ovarian tumour has been undertaken, it has been completed in 51 instances, in 14 out of which 51 instances it has been followed by death, and in 37 by the successful removal of the tumour and the recovery of the patient; whilst out of the 74 cases selected, it was found impossible to carry out the intentions of the operator in 23; or, in other words, the diagnosis was not sufficiently accurate to enable the surgeon to foresee the impracticability of carrying out his intentions. Of these 23 cases, 13 recovered with life, to remain

in statu quo ; 10 died. The cause of failure was impossibility of removing the tumour on account of adhesions in 14 cases; no tumour was found in three cases; and the tumour proved to be other than ovarian in six instances.

Medical Gazette, Oct. 18, 1844, *p.* 87.

64.—FURTHER REMARKS ON NITRIC ACID IN HÆMORRHOIDAL AFFECTIONS.

By JOHN HOUSTON, M. D., M. R. I. A., &c., &c.

[In Retrospect, vol. 7, article 62, will be found a very excellent paper by Dr. Houston on this subject, taken from the Dublin Journal of Medical Science, for March, 1843. In another paper just published in the same Journal, he gives us his further experience on the same subject. To prevent disappointment in the application of this remedy, it is necessary to have Dr. Houlston's precept always in view. He says—]

The only case which the nitric acid will serve is the *internal* bleeding pile,—that soft, red, strawberry-like elevation of the mucous membrane, for which I have used the term *vascular tumour*, and which the acid removes by the production of a slough of its surface. The surface to be thus acted upon must be soft, and free from any coating of cuticle, such as is apt to form on it by persistent prolapse; for, if the acid be used in a case so circumstanced, nothing more than a removal of the cuticle may be expected from the application; and further, to ensure to the caustic its full effect, the part to be touched by it should, beforehand, be dried and cleared of all mucous or other adherent fluids. There is no danger, that I know of, to be apprehended from the application of the acid: I have never seen any consequence from it beyond what I have stated in my reports. But, to be successful, the remedy must, of course, be used with decision. The acid must be laid on in quantity, and rubbed in with force enough, to be pressed into the pores of the surface. At the best, it produces only a very superficial slough; and, on this account, it will be necessary in some cases, as where the tumours are old and firm in texture, to make a second, and even a third application. Of this the patient should, of course, be informed beforehand, that he may not be taken by surprise, in case any such necessity should arise.

As stated in my former communication, I do not take upon me to recommend the nitric acid as an infallible remedy in all such cases, nor even, perhaps, as the most effective in any; and, in illustration of the efficacy of another mode of treatment—that by the *actual cautery*—even after a failure by the acid, I shall introduce a case, in the sequel. The great value of this remedy lies in its applicability to general practice, and in the readiness with which invalids can be prevailed upon to submit to its employment. It is not so much the fear of pain, in the abstract, as of the instruments by which it is

inflicted, that prevents many from submitting to the means necessary for a removal of such diseases; and if the surgeon can thus, by the substitution of an acid for the knife, the noose, or the red hot iron, succeed in stripping his services of their terrors, he will, by gaining upon the patient, steal a march upon the disease, and thereby find an opportunity of applying to it an easy, because an early, remedy.

It would be a prejudice against the acid, not founded in fact, to have it go abroad that the treatment by its means was very painful, for there is no peculiar or unusual amount of pain produced by its application, and sometimes the pain is very trifling. I assisted my friend, Dr. Fleming, in his own study, in the application of the nitric acid to a vascular tumour of large size in a young gentleman, who, after leaving us, thought so little of the matter that he walked for amusement to witness the ascent of a balloon; and, nevertheless, the application was shewn afterwards to have been sufficiently effective, by its curing completely the disease. The fact is, that as in every other operation of the kind, the amount of pain experienced will be very much in proportion to the irritability of the patient, and the sensitiveness of the affected part, and, therefore, in all cases where there is much apprehension on this point, where the application of the acid has been extensive, and, particularly, where there is a prolapse to be kept up, it will be well to administer an opiate, and let the patient retire to bed.

[Dr. Houston relates several interesting cases to explain his treatment. In case 5, which had been gradually getting worse for some time, beginning with a slight discharge of blood periodically from the rectum, there was almost continual prolapse of a small portion of the mucous membrane of the rectum, presenting an irregular aspect, "being in some parts formed of shining rolls of œdematous mucous membrane, in others of blue varicose veins, and in others of red *vascular tumours*,—the latter, three in number, being the source of all the hæmorrhage and pain. He bled every time he had a stool, to the amount of two or three ounces. The *nitric acid* was applied to these *vascular tumours* exclusively, by rubbing each several times with a piece of stick dipped in it, so as to make some of the acid soak into the tissue of the part, and immediately afterwards smearing the surface with oil. The prolapsed portion was then carefully returned. On the sixth day the sloughs formed by the escharotic had disappeared, leaving granulating sores. On one part, however, the slough was not deep enough, and the acid was re-applied. The case was soon cured. The sixth case, on admission, was as follows:—]

The muco-purulent discharges are now constant; the blood occasional; he has almost continually pruritus; he finds difficulty in controlling his inclinations to sit long, and strain at the night-chair, after the evacuation is completed, notwithstanding his long experience of the fallacy of the sensation of there being still something to come away, and his conviction that he has the power of at once relieving it by returning the prolapsed part to its place. He has rarely a

stool, unless as the result of medicine; the tongue is white, and he complains of thirst, bad appetite, and flatulence. He suffers from an uneasy sense of fulness, with a glow of heat, and pulsatory throbbing inside the anus.

On straining in the sitting posture, a protrusion takes place, at least an inch and half in length, spreading broad over the sides of the anus, and exhibiting three large blood-red tumours on its mucous surface. The whole texture of the protruded part is tumid from congestion, but the *vascular tumours* stand out beyond the general surface of the prolapse, although they do not, to the feel, exhibit any greater density or hardness than the other parts. Blood oozes from them if they be allowed to remain protruded for any time; the prolapse is not at present at its worst, nor is it accompanied with pain; there is little appearance of varices in the neighbourhood, either inside or outside the anus.

On the evening of the 13th I administered a purgative draught. On the 14th, while the prolapse was at its greatest projection, I applied the nitric acid effectually to all the tumours. The application caused them to bleed freely; but this was more from the friction on their turgid surface, than from the escharotic effects of the acid; oil was then applied, and the protrusion carefully reduced. The man was placed on his back in bed, with directions not to allow the prolapse to recur: an opiate was administered. The pain of the application was not much complained of.

[This case also did well.]

Case 7.—Nothing is to be seen outwardly, but when the patient bears down, especially after medicine, several soft, bright-red, strawberry-like tumours appear, protruding at the orifice, and bleeding when touched, or kept long out. The disease springs from the surface of the mucous membrane all round, but rises in the form of distinct tumours. The mucous membrane at the very verge of the anus is thrown, by œdema, into a soft prominent rim, which looks like a frame in which the tumours, when protruded, are set. The affection, although sometimes very painful, is not so at present, and may therefore be regarded as in a favourable state for being made the subject of an attempt at a radical cure.

Nov. 23. The prolapse being well borne down by the patient, and the nates held asunder by an assistant, the tumours were rubbed with the acid. Nothing unusual or untoward followed. On the fourth day he had a free motion from medicine, without much pain, and without prolapse or bleeding. He suffered so little disturbance from the application, that, at his own request, I took the opportunity of his being in hospital to operate on him, by slitting open the urethra, for the cure of a stricture at the orifice, the consequence of a chancre,—in the manner recommended by the late Professor Colles; and at the expiration of another week, finding that there was still a small bit of one of the rectal tumours remaining, and shewing itself at the anus, he consented to a second application of the acid,

for its removal, radically. This was made as before, with very little distress to the man, for he walked about the ward every day, and with a still better effect than on the former occasion, as he left the hospital on the 21st December, cured of both his infirmities.

Case 10.—The following case I shall report, as an illustration of what may be done when the remedial power of the *nitric acid* fails; or, of what would be, perhaps, the best thing to do, at once, in all bad cases, if patients could be prevailed upon to submit to it as a remedy, viz., to resort to the application of the *actual cautery*.

Mary Johnson, ætat. 41, a washerwoman, married, and the mother of five children, admitted Jan. 9, 1844. She had had a very tedious labour in her first confinement, nineteen years ago. After delivery her bowels became confined, and continued so for eight days, although during that time active purgatives had been administered. At length her bowels gave way, when each evacuation caused her very severe pain, and was accompanied with a discharge of blood. The bleeding ceased at the time, but from a little time after that period, until now, she has scarcely ever had a motion without its being accompanied with more or less of blood, and which had been gradually increasing up to the present time, so that she now passes at every stool one or two wine-glassfuls of blood, sometimes clotted, sometimes in a fluid state. For the last two years she has suffered from prolapsus ani. At first the bowel simply came down at each motion, and returned again of itself; but now it descends on many other occasions, and she finds much difficulty in replacing it. She is quite unable to retain her alvine discharges with certainty; they sometimes come away even while walking across her room. As long as she had only "piles," as she terms her first complaint, she was comparatively indifferent to her ailments, but since the bowel has come down she is both unhappy and uncomfortable, and for the last year disabled, by headaches and palpitations, from earning any livelihood by her work. On making an examination, after causing the patient to strain a little, the mucous membrane of the rectum is found to be prolapsed for better than an inch, but when out is not much strangulated, as the sphincter has become permanently dilated and relaxed. Four prominent vascular tumours—two smaller ones on the left, and two much larger, on the right—present themselves on the prolapsed mucous surface. The other parts of the membrane, although relaxed, appear of the natural colour and consistence.

This case was very unpromising, as the prolapse and the dilated state of the anus were complications, indicating curative ends to be accomplished different from those which the nitric acid is supposed to be calculated to effect. It was deemed well, however, to try the effects of the acid on the hæmorrhagic parts of the surface, and to be determined by the result, as to the treatment which should be applied to the prolapse. Accordingly, after a few days had been devoted to attempts at improving the woman's general health, on the 13th the vascular tumours on the prolapsed surface were smeared with the acid. The physical effects were those ordinarily produced,

and the hæmorrhage ceased for some days, viz., while the sloughs remained adherent to the surface. But cicatrization did not follow the separation of the eschars; the bowel descended as before, and the hæmorrhage returned from the raw surface. In fact, the debility of the patient was such that the powers of reparation appeared totally at a stand.

On the 23rd, after the best endeavours to impart some strength to the woman had been practised, a second attempt with the nitric acid was made as before, and with this difference only, that the application was successful in checking any further hæmorrhage, whilst it failed in curing the prolapse. The tumours, however, retained their red colour, and would, no doubt, have bled shortly again, if left to themselves.

It was under these circumstances that I determined on the use of the actual cautery,—a remedy the same in principle as the nitric acid, and which may be brought in, *in extremis*, and where the milder remedy fails. I intended to use the red-hot iron with a double view, 1st, of destroying, radically, the bleeding piles; and 2ndly, of burning a vertical piece deeply out of the wall of the rectum, and of bringing about, in its stead, such a cicatrix as would prevent any farther prolapse. The instruments I made use of for the purpose, were, a hollow, conical, steel speculum, closed at the farther end, and cleft with a slit, vertically, along one side, the handle being attached to the opposite side of the mouth of the cone from that in which the slit lay, and a cauterizing iron, with the end of a shape to pass out through the slit in the speculum. Having introduced the speculum into the rectum, and cleared and dried it well, inside, of the mucus and fluids which had been collected in it during its entrance, I introduced the iron, of a white heat, and laid it vertically through the slit in the canula, on the mucous membrane of the rectum, for better than an inch. In fact, it became unnecessary to direct the iron out of the tube, for the mucous membrane was so pushed into the slit by the surrounding pressure, that enough of it found a contact with the heated iron to receive all the impression necessary from that instrument.

The woman was subsequently treated just as she had been after the other operations; and she stated that the pain from the application was neither so intense nor so long continued as it had been after the application of the acid. There was a little soreness and tumefaction in the part for some days, but when the woman remained quiet she felt easy, and on the third day she had a full evacuation after an oil and senna draught. From the day of the application of the cautery, the bowels came down no more, the hæmorrhage ceased, and the woman bagan to improve in health. She left hospital on the 24th February, and on the 12th March, when she came back to shew herself, she had so much improved in health that I did not, at first sight, know her. She had no bleeding whatever, no prolapse, no pain, and no discharge of any kind from the rectum. She had altogether lost the head-aches and palpitations, and had greatly improved

in strength. She said she was quite cured, and had resumed her usual business.

Observations.—Cases of this description will, if looked for, be found to be more common than is supposed. Indeed the form of disease, of which the above examples may be regarded as extremes in severity, would appear to be that into which the mucous membrane of the lower end of the rectum is prone to run when long irritated by congestion or prolapse, and usually goes by the name of internal piles. The destruction of the vascular surface by the nitric acid stops the hæmorrhage, and if the relaxation be not immoderate, cures the prolapse by bracing up the textures underneath. But, it must not be forgotten that the cure by such means is only the beginning of an end. A course of dietary and of exercise must be instituted in conjunction with it, the very opposite of that under which the disease sprung up and got head, aided by cleanliness and appropriate topical and general medicines.

It will have been observed that, in the reports of the above cases, I have always spoken of returning the prolapse, if possible, after having applied to it the acid, and this is a part of the operation which should not be omitted; because, when the parts are restored properly into their place, they are both in a predicament at once to grow aright while healing, and also to go through the steps of reparation with the least distress to the patient, and in the quickest time: whereas, if the protruded part be allowed to remain down until the inflammatory tumefaction, consequent upon the operation of the caustic, is developed in it, the bowel will, then, not only take a fixed seat in the prolapsed position, but the tumefaction will be increased by the constriction of the sphincter upon it, and the pain consequently aggravated, as well as the period of the convalescence prolonged.

The treatment of such affections by the *actual cautery*, although the most repulsive to the feelings both of the surgeon and the patient, is, nevertheless, that of all others the most effective. The nitric acid, in its *modus operandi*, comes the nearest to it; but falls short of it in efficacy. They both produce the death of the part they are brought to touch. The acid acts on a superficial layer only, the deeper parts being protected by the decarbonized stratum first formed, and is, therefore, a fit and appropriate remedy whenever a thin layer is the extent diseased and requiring removal; the iron, on the contrary, at a white heat may, by having the period of its application prolonged, be made to cause death to any necessary depth, and is, therefore, applicable whenever the removal of a larger amount of substance comes to be desirable. In this way the hæmorrhage in the case of Johnson was, for the time, arrested by the acid; whereas the prolapse required the more deep operation of the actual cautery for its cure. If the red hot iron could be applied without the accompaniments of smoke, and noise, and smell, it would soon have many advocates for its use; for, even as compared with the effects of the nitric acid, the pain of

its application lasts a shorter time, and the inflammation which attends the detachment of the slough is more moderate. I have, on a late occasion, introduced the actual cautery through a metallic speculum into the rectum of a man, and seared the mucous membrane deeply, about one inch and a half up, and the patient never knew, either by his feelings at the moment, or subsequently, that any operation of the kind had been performed upon him.

With regard to the practicability of a cure in the cases which I have detailed by the means in common use, viz., the knife or ligature, I consider that the nature and characters of these affections were such as to render attempts at treatment by either of these modes both unsuitable and unsafe; and I believe that the only kind of remedy calculated to accomplish such an object, effectually, must have been some one whose principles of operation were the same as those of the nitric acid or actual cautery,—if not these very remedies themselves.

As to the question of the safety of drying up such hæmorrhoidal fluxes when of so long standing as that in several of the cases which I have described, the relief from misery and pain, and the rapid restoration to health which followed, and which, I may add, has continued unabated in those reported in my former essay, afford a sufficient answer in the affirmative, as far, at least, as those cases are concerned. The fact is, that the most prominent ailments presented by these afflicted people were those arising from the loss of blood, such as palpitations, giddiness, faintings, weaknesses, &c., and the reparation of such ailments constituted some of the most important items in the cure. The cases must be few and hopeless, indeed, in which relief from such infirmities as these would not be acceptable at the risk of being subjected to something worse,—a risk, too, be it observed, in itself chimerical; and even should the apprehended evil arise, that evil admitting, perhaps, of a remedy, in the establishment of a counter-drain or issue in some other region of the body.

Dublin J. of M. S., September, 1844, *p.* 32—49.

65.—ON INJURIES OF THE KIDNEYS.

By Cæsar Hawkins, Esq., Surgeon to St. George's Hospital.

[It is rather surprising that so little should have been written on injuries of the kidneys. This is probably owing to the circumstance that so many cases, in which these organs are suspected of being injured, recover. Mr. Hawkins says that he has looked over the indices of the Lancet and Medical Gazette for the last 20 years and only found references to three cases of this kind. The kidney may be injured in a variety of ways, giving rise to very different symptoms. 1. It may be lacerated and cause death by hæmorrhage into the cavity of the peritoneum, with the addition likewise of urine escaping into the same cavity. 2. It may be lacerated, with its

capsule, and both blood and urine may escape into the cellular tissue around it, without the serous membrane being torn; and the fatter the person is, the more distant the peritoneum will of course be from the gland. In these cases it has happened that death has ensued from secondary hæmorrhage into the parts around the kidney, behind the peritoneum, many days (in one case as late as the 10th day) after the accident, and when the patient appeared to be doing well. 3. There may be no laceration of the capsule of the kidney, but an injury may extend into the infundibula and pelvis of the gland, so that the effused blood escapes into the interior, and hence there is *hæmaturia*. A great quantity of blood may be lost in this way; as much as three pints at once. 4. Another consequence of injury of the kidney is *suppuration* within the organ. 5. And another effect is illustrated by two examples published by Mr. Stanley, in which besides suppuration, there were formed fluctuating tumours or cysts, containing a clear yellow fluid, resembling urine. With respect to the treatment of some of these cases, Mr. Hawkins says]

In the first place, with regard to the hæmaturia, it is seldom that its amount causes any alarm; but if the blood comes away in great quantities, you have the same resources as in other internal bleedings, to which alone you can look for checking hæmorrhage from the kidney which does not pass down with the urine. You can cause syncope by bleeding, and you can give styptics, which I have seen do much good in some cases of hæmaturia. Of these the best is lead; so that you can give three grains of the acetate with a quarter of a grain of opium every three or four hours for a time. In some cases, in which the lead failed, or alternately with it, I have seen the powdered galls stop the bleeding; this was the case in the man from whom this long coagulum of the shape of the ureter was withdrawn, who took fifteen or twenty grains every six or eight hours with much advantage. This medicine is, however, rather nauseous, and sometimes irritating to the stomach. You can also give a dessert spoonful of Ruspini's styptic every three or four hours. You might reasonably expect that, if these medicines have power in any case of hæmorrhage, they would be of especial service in hæmorrhage from the kidney, to which organ so large a quantity of blood is constantly passing. Another styptic—turpentine—which is useful in passive bleeding from the kidney, does not seem to be applicable to cases of injury in which inflammation is present. The presence of blood in the bladder does not usually occasion much trouble; it did so in the patient from whom this blood passed, and I was obliged to wash out the bladder to free it from coagula and enable the urine to escape, not after an accident indeed, but for fungus hæmatodes of the kidney. With a double catheter and warm water there is no difficulty in doing this, if you are obliged; at all events there can be no occasion to perform the high operation, as for lithotomy, which was done in one case by Mr. Copland Hutchinson,

where blood lodged in the bladder. In most cases, however, you may disregard the amount of hæmorrhage, and treat the case as you would another in which there was no bleeding, and you will find it cease gradually in two or three days. I need not say that rest is necessary, and with this you must employ antiphlogistic remedies. You see that our patient now in the house has been cupped once, and has had leeches also once, and fomentations to the painful side; and such means are usually enough. In the case, however, which I read to you, of recent suppuration, I was obliged to bleed as often as five times; cupping, however, is generally sufficient. Then you saw that I gave calomel and saline purgatives; and if you have occasion for purgatives in these cases, and particularly when the lithates abound, as they did here, the salts you select should be the vegetable ones, the potassio-tartrate of soda, or the tartrate of potash, so that the alkalies may at once pass to the kidney and neutralise the excess of acid. Then, again, you may give saline draughts, and add to this sometimes some colchicum if the inflammation does not easily yield.

After the first symptoms have subsided, you must next look carefully for remaining pain and weakness in the loins, and use counter-irritants; apply blisters, taking the precaution of using some muslin or tissue-paper under them, in order that the cantharides may not be absorbed and pass to the injured or inflamed kidney; and finally, if such pain and weakness continue long, you should insert a seton or an issue over the affected part, which you will do with the view of preventing the formation of abscess or other chronic disease of the kidney, and also to obviate another future mischief, which has been pointed out by Mr. Earle, in a paper in the Medico-Chirurgical Transactions, namely, the formation of calculi in the kidney; though it does not seem very probable that these bodies would be deposited unless the patient's urinary secretion was otherwise disordered.

Medical Gazette, May 24, 1844, *p.* 245.

66.—TREATMENT OF TRANSVERSE DIVISIONS OF THE LARYNX AND TRACHEA.

By Edward Stanley, Esq., Surgeon to St. Bartholomew's Hospital, &c.

[When either the trachea or larynx is divided, it is usual for surgeons to trust too much to position. Mr. Stanley seems to think that this is the invariable rule with surgeons, but this we think incorrect. There is frequently so much disposition in the lower portion of the divided structure to retract, that it becomes quite necessary to secure its position by suture, when this disposition to retraction is evident. Mr. Stanley brings forward some interesting cases to prove the truth of this opinion, and then says]

The foregoing cases shew the inadequacy of position alone to obtain the approximation of the parts, when the larynx or trachea

has been freely divided in the transverse direction," and consequently suggest the propriety of using sutures in the treatment of these injuries. But sutures passed through the soft tissues covering the larynx or trachea will be of no avail; to be effective, they must penetrate the cartilages themselves, or the fibrous tissue which unites them. Moreover, the right time for employing sutures must be chosen. During the first period of the case they are scarcely admissible, from their probable effect in preventing the free escape of the blood through the outward wound; nor should they be delayed to the period when the integuments, &c., have firmly cicatrized around the lower retracted and sunken portion of the larynx or trachea. The following observations have been recorded by Rust of Berlin, shewing that he had observed the difficulties which were met with in the foregoing cases, and that he had, as it appears to me, rightly considered the means of obviating them. Rust observes, that "in wounds dividing only partially the trachea or larynx, a suitably inclined position of the head and neck is generally all that is required to effect a speedy union; but where the larynx or trachea is completely cut across, it becomes expedient to have recourse to sutures. The tendency of the lower portion to sink down from the upper is often so great, that we must not limit our sutures to the cellular tissue, but pass them through the substance of the trachea itself, and even through the cartilages of the larynx." He then relates a case of cut throat which occurred in Charité Hospital at Berlin, where the thyroid cartilage was divided, and adds, "that in this patient, the tendency of the lower end of the divided larynx to sink down from the upper, was such as to occasion the necessity of a suture through the substance of each portion of the cartilage (thyroid), that sutures passed simply through the soft textures repeatedly gave way, and that the healing in this case was perfect."

[Mr. Stanley remarks that in such cases when a liquid is swallowed, it often passes down the trachea, and comes out at the wound, giving rise to a suspicion that the œsophagus is also wounded—but this is owing to a loss of irritability of the glottis, which thus allows the liquid to pass.]

Med. Gazette, Oct. 25, 1844, *p.* 98.

67.—ON THE OPERATION FOR FISTULA LACHRYMALIS.

By R. Liston, Esq., F.R.S., &c. &c.

Suppose, says Mr. Liston, that you have a fistula lachrymalis to deal with, that there has been inflammation and suppuration of the sac at the inner corner of the eye, and that this collection has been opened, or has been evacuated by ulceration, and the coverings may have so far contracted, but still the fluids from the eye and sac are discharged upon the cheek, you must endeavour to restore the nasal duct. For

this purpose an incision must be made into the sac. It is of no use to attempt passing a probe through the fistulous opening. You must introduce a narrow bistoury through the sac down into the duct, and lodge it fairly in the bony canal, or you may employ a sort of sharp pointed grooved director, which has been recommended by Dr. Lubbock, of Norwich, a very old pupil and house-surgeon of mine, who, though he is a doctor of medicine, still practises the higher branches of the profession. You are told that it is necessary to feel for the tendon of the orbicularis palpebrarum, but when there has been inflammation present, and this always precedes the formation of matter and fistula, you can feel nothing of the kind,—you must trust to your eyes and your anatomical knowledge. Knowing the direction of the canal you put your knife behind the margin of the bone, behind the nasal process of the superior maxilla, push it down at once, and lodge it fairly in the canal. In that way you are in a position to make the passages pervious. If you follow the knife with a probe, withdrawing the knife whilst you introduce the blunt instrument, you come at once into the nose, and there will possibly be some slight flow of blood from the nostril. If, after a few days, you close the nostril and make the patient expire forcibly, the blood and matter will be thrown up into the corner of the eye, and then you are sure that you have properly effected your object. You must remember that the bony parietes of the nasal duct are, in some respects, very thin. The intentional perforation of them was contemplated, proposed, and even practised by our forefathers. When any difficulty arose in getting the natural canal restored, the os unguis was bored through with a large *trois quarts*, and even the actual cautery was by some resorted to, in order to make a more permanent opening for the passage of the tears and discharges into the nose. This proceeding is now, happily, abandoned, and, I may say, forgotten. But unintentionally, and from ignorance, the posterior part of the canal is occasionally penetrated by the knife or probe. If the point of the instrument, instead of being directed downwards and slightly backwards in the course of the canal, is pushed more directly backwards, it may be made very readily to penetrate the ethmoid bone, and it will then be lodged above instead of below the inferior spongy bone,—a serious blunder enough. But it is necessary to keep the passage pervious, and with this view it has been recommended to introduce into the nasal duct, from above, various sorts of tubes,—a very unsurgical proceeding it seems to me,—but one practised by many good surgeons, and by one in particular, very eminent in our profession, the late Baron Dupuytren. Here is his tube; it is to be pushed down, and the head of it lodged under the skin. The immediate effects are exceedingly satisfactory; the opening will be closed in a very few hours; in less than a day, perhaps, all the inflammation will have abated, the tears will pass readily into the nostrils, and everything promises uncommonly well. But you must not expect that the patient is cured; in all probability fresh inflammatory action will be set up in a little time, perhaps no

for weeks or months, but it will occur sooner or later, and you find it necessary to take out the tube, which is not always a very simple matter. I at one time practised this method in a good many cases, six or eight times in one season, and all the patients, with the exception of one, came back to have the tube removed, some experiencing one inconvenience and some another, and I have no doubt that the tube in the excepted case was taken out by some other surgeon. Various forms of tubes have been recommended, some of silver, some of gold, but I would not advise you to insert any of them, whatever their composition or shape, because, as foreign bodies must cause inflammation, you will be under the necessity of removing them, and if this be done, the patient, after all his sufferings, will be in the same state as before.

But suppose that a patient comes to you who has had a tube put in by some one else, it is productive of great irritation of the parts and suffering to the individual; how are you to get it out? The tube is out of sight, the skin has closed over it, there is an abscess about it. You divide the skin, and you feel the end with the point of your bistoury or with a probe, but you cannot insinuate a pair of forceps to seize or extract it. The tube is generally lodged deeply and pretty well fixed, and you must introduce a probe, made with a screw, into the metal tube; by a turn or two you fix it firmly, and thus remove it. These probes are often very useful in ascertaining whether portions of bone are loose, in removing small sequestra.

I have stated that you are not to employ a tube in the treatment of lachrymal fistula, but you may, with great propriety, use what is called a style. You introduce a bit of a small wax bougie in the first instance, or you had better provide yourself with a silver probe of proper length, and use that at once, making it follow the knife or grooved director. If there is a large ulcerated opening you may put a bit of thread to prevent its slipping down out of sight, which sometimes takes place. If you have not a very large opening you lodge the style in the duct, and leave the nail-head projecting. You must have styles of different sizes and lengths to suit different individuals. You, of course, do not expect that a style suited for an adult male should lie comfortably in the nasal duct of a young female, in whom the bones of the face are much smaller. The style should be of such a length that the head merely appears at the corner of the eye, whilst the lower end rests on the floor of the nostril, or nearly so. There may be a little excitement for a time consequent on the lodgment of the style, with some discharge, but this soon finds its way along the sides of the probe, and into the nose, gradually diminishing in quantity. The actions of the parts soon become quiet, and the patient wears the style without inconvenience, and it can be taken out night and morning, wiped and replaced without pain. If he chooses he may leave it after a while during the day; there is a mere pin-hole, which is scarcely observable, and through it a small style may be introduced at night and removed in the morning. This is a rational and proper mode of proceeding to keep the parts pervious.

How long the style is to be worn, and at what period it can b discontinued without risk, must depend on circumstances.

Mr. Liston's Lectures, Lancet, July 13, 1844, *p.* 49.

The practice that has been followed, for many years past in Italy, in the treatment of chronic inflammation of the Lachrymal Canal is to introduce a minute fragment of the *lunar caustic* into the fistula, if such be present; or by a small puncture made into the sac, if not. An acute inflammatory action is immediately set up; but by the following day this is usually much diminished, and ceases entirely in three or four days afterwards. The engorged parts then gradually subside, the purplish colour changes to a white, the tears resume their natural course, and every trace of the disease vanishes. In most cases a single application of the Caustic is sufficient. Professor *Lallemand*, we are told, very generally adopts this mode of treatment.—*Clinique de Montpelier.*

Med. Chir. Rev., Oct., 1844, *p.* 499.

68.—ON THE USE OF PURE TANNIN.

By Robert Druitt, Esq., London

The cases in which I have employed tannic acid or tannin in a state of purity, says Mr. Druitt, are sore nipples, excoriations about the anus and scrotum, piles, leucorrhœa, atonic phagedenic sores, toothache, aphthous sores in the mouth, severe salivation, and relaxed sore throat. I have never given it internally, although I should think it an admirable remedy in menorrhagia and hæmaturia.

For sore nipples especially, I have found it invaluable. Every accoucheur knows what a source of wretchedness and illness these are to the young mother, and how difficult it often is to find a decisive remedy; but I have never been disappointed in the use of tannin, except once, in a neglected case, with deep irritable cracks, for which it was necessary to use the lunar caustic. The tincture of catechu was lately much praised in these cases, by a writer in the Lancet, but it is not to be compared with the tannin in neatness and elegance. It certainly is an advantage to use a remedy that will not stain the linen, nor be otherwise disagreeable. The form which I employ is a solution of five grains in an ounce of distilled water; this is applied to the nipple on lint, covered with oiled silk.

For the itching excoriations about the anus and scrotum, which so much infest old men, I have used it with benefit, but prefer lemon juice as a local application. For piles, with mucous discharge, I have also found it of use, but cannot say much on this point from my own experience.

In obstinate leucorrhœa, I have used it as a vaginal suppository, ten grains being made into a mass, with tragacanth, and introduced and allowed to dissolve. But in this disorder I believe alum and the other mineral astringents to be of more service; and that in many

cases such treatment as will reduce a swelled and congested uterus is of more consequence than any mere local application.

In one or two cases of lingering atonic phagedena, I have found it of some service, sprinkled thickly on the sore; but more particularly so in those aphthous ulcers which sometimes occur in the mouths of adults, from acidity of the stomach, and congestion of the liver. I may say that I believe it the best possible remedy for severe salivation, and for all cases of relaxed sore throat attended with superabundance of mucus. It coagulates the mucus, and enables the patient to get rid of it easily. Of course I do not use it to the exclusion of constitutional remedies; but of all the local means of making the mouth *comfortable*, I believe it to be the best.

But of all the cases for which it is adapted, that common troublesome complaint toothache is that in which I believe it is most to be depended on. For this piece of useful knowledge I am indebted to my friend Mr. Tomes, and I have tested it by ample personal experience. It will often be found, as Mr. Tomes told me, that the gum around a carious tooth is in a spungy flabby condition ; a little piece of it perhaps growing into the cavity. The ache too is often quite as much in the gum as in the tooth itself. But, be this as it may, when the tooth aches, let the patient wash out the mouth thoroughly with a solution of carbonate of soda in warm water; let the gum around the tooth, or between it and its neighbours, be scarified with a *fine* lancet; then let a little bit of cotton wool, imbued with a solution of a scruple of tannin, and five grains of mastich, in two drachms of æther, be put into the cavity, and if the ache is to be cured at all, this plan will put an end to it in nine cases out of ten. I think that practitioners are to blame in not paying more attention to the cure of toothache ; I am convinced that in most cases it is as curable as a colic or a pleurisy ; the chief point being to open the bowels, and put the secretions of the mouth in a healthy state, and to apply some gentle astringent and defensative to the diseased tooth till it is capable of being stopped by some metallic substance. I say emphatically a *fine* lancet, because the coarse, round, blunted tools that are generally sold under the name of gum-lancets, only bruise the gum, and cause horrible pain. The lancet which I use is sickle shaped, cutting on both edges, and finely ground; and if guarded with the middle finger of the right hand, it may be used in the case of the most unruly children without any possible ill result.

Prov. Med. Journal, Oct. 9, 1844, *p.* 431.

69.—ON THE RADICAL CURE OF HYDROCELE.

By W. H. Porter, M.D., one of the Surgeons of the Meath Hospital, &c. &c., Dublin.

[The treatment of this disease is now so simple and efficacious, that it would not have been necessary to notice the method of Dr.

Porter, if his extensive opportunities of practising it had not given great weight to any thing he might have to say on the subject. He alludes to the occasional inconvenience and danger from the operation by injection, the cellular tissue being occasionally injected with the fluid instead of the tunica vaginalis, causing thereby great suffering and even danger. He alludes also to the great variety of liquids which are used, such as hot and cold liquids, solutions of different salts of various degrees of strength, wine, brandy, and iodine. He says—]

I have operated frequently for the cure of hydrocele by injection, and, I suppose, with as much success as others have experienced, but I never could consider it a safe or satisfactory operation, or propose it to a patient with the same confidence which I have felt in other cases. I have known it to be *almost* abandoned in the private practice of some eminent surgeons, who never advised it, and performed it, when obliged so to do, with evident reluctance. Even authors who have advocated it most strongly admit such a number of exceptions to the general rule, as to show that they could not have viewed it otherwise than in a dubious light. Thus Dupuytren, who says that the operation by injection is one of the best, the most prompt and most simple for the cure of hydrocele, yet enumerates a vast number of complications that would render it improper, and then states that when there exists the least doubt, the least uncertainty on the nature of the disease, some other ought to be selected. In such he generally recommends the operation by incision.

Under these circumstances I was induced to make trial of other operations, and, after the experience of several years, have adopted that one which I am about to describe, which, if not altogether free from the objection of a possible relapse, or return of the disease, is not so liable to be followed by the severe and violent inflammations that render the operation by injection so perilous.

This operation is partly that by incision, the only difference being that instead of dividing the tunica vaginalis in the entire extent of the tumour, my incision extends only from an inch to an inch and a half in length; and partly that by the tent, an operation first proposed (it is said) by Franco, but revived and recommended by the celebrated Larrey. Having first punctured the tumour in order to examine the state of the parts, and satisfy myself that it is a case in which an attempt to cure the disease radically may be safely made, or at least in which such attempt would be justifiable, I allow the sac to fill again. When the disease has reappeared, and the tunica vaginalis is as much distended as it previously had been, I perform the operation thus:—Having that part of the scrotum in which I intend to operate shaved, I make the incision of the length above mentioned, down to the tunica vaginalis, and examine carefully whether any vessel has been wounded that could possibly furnish a considerable quantity of blood. I then pass a bistoury into the

tunica vaginalis at one extremity of the incision, out at the other, and divide it by a rapid withdrawal of the instrument. Having completed the incision, a tent of rolled lint, moistened with oil, and secured with a ligature, so as to be easily withdrawn, is introduced. The operation is then completed. The patient may be placed in bed. On the succeeding day I generally bleed from the arm to the extent of ten, twelve, or fourteen ounces, and particularly if the scrotum is red, and shows a tendency to inflammation. Latterly I have adopted this practice as a preventive in all cases with apparently the most satisfactory results. The tent is left to become loose, and drop out of itself, which usually takes place on the third or fourth day, and need not be replaced; but it is desirable to break up any adhesions that may be formed between the lips of the wound, and to introduce the finger occasionally into the cavity of the tunica vaginalis until the sixth, after which it may be treated with light superficial dressing, and the cure is generally perfect in about three weeks.

I have now practised this operation for fifteen years, and, comparing it with others, have not much reason to feel dissatisfied. At first I was in the habit of plunging the bistoury at once into the tumour, and completing the incision to the requisite extent by making it cut its way outwards rapidly and at once. This gave an appearance of great simplicity to the operation, but in some instances caused the fluid to become extensively infiltrated in the cellular tissue, which looks unseemly, although really of no consequence, as it is absorbed in a few hours: but the following circumstance induced me to abandon that, and adopt my present mode of proceeding. In July, 1837, I operated on a gentleman above sixty years of age, and in doing so opened a tolerably-sized vessel in the scrotum, and dressed the patient without being aware of the circumstance; the contraction of the parts, and the introduction of the tent, probably preventing the flow of blood: hæmorrhage took place, however, into the sac, and on visiting him in a few hours I found the tumour as large as it had been before the operation, of a dark, red colour, very painful, and with a coagulum protruding through the wound. I was obliged to incise the tumour through its entire extent, turn out the clots, and secure both ends of the vessel by ligature: and although the case eventually terminated in a perfect radical cure, yet the patient had to undergo a severe attack of inflammation, profuse suppuration, and a confinement so protracted, that it was two months before he was able to walk abroad. This is the only casualty of the kind I ever experienced, and a recurrence of it is, I think, sufficiently provided against by the precaution of cutting carefully through the teguments before the tunica vaginalis is opened. I now perform this operation with the greatest confidence, and without more preparation than may be necessary to ascertain whether the parts are in a condition to warrant any interference at all, and think I have so treated cases in which the injection would scarcely have proved successful. There is a patient of

mine now pursuing the laborious occupation of a porter, on whom the operation was performed six years since; it was a case of double hydrocele, of immense size, the scrotum being so distended that the penis was obliterated, and appeared like a navel in the middle of the upper portion of the tumour; one of the cysts contained a dark coloured fluid like port wine, evidently produced by an admixture of blood, the result of some recent blow or accident. In this case both the hydroceles were operated on at the same time, yet the patient progressed without a bad symptom, and was so far recovered as to be able to leave the hospital in less than four weeks. The disease has never returned since.

Dublin Journal of M. S., July, 1844, *p.* 402.

[Mr. Adams, assistant-surgeon to the London Hospital, in a case of hydrocele, simply withdrew the fluid and then pushed through the canula a camel's hair brush dipped in a strong solution of iodine so as to paint or smear it over a considerable portion of the internal surface of the sac. This was succeeded by the ordinary train of symptoms, and seven weeks afterwards the cure seemed to be satisfactory.]

Lancet, Nov. 2, 1844, *p.* 154.

70.—REMARKS ON THE OPERATION FOR HARE-LIP.

By Robert Liston, Esq., F.R.S., &c. &c.

This operation must be modified according to the extent of the fissure and the space between the parts of the lip. In the first place, you are to consider at what period the operation is to be performed; some persons say it cannot be performed too early, and many parents are very anxious to have it performed immediately after birth. Some of the obstetric practitioners in this metropolis do perform it upon infants, but they often make sad bungling jobs. I advise you to defer the operation till the first set of teeth have come in, and I have seen good reason for adhering to this rule. When the operation is undertaken at an early period there is often great difficulty; sometimes union does not take place, the parts turn out again, and the patient is rendered more deformed than in the first instance. When the features are enlarged somewhat you have more ground to work upon, you can put the parts then neatly together, and you can almost answer positively for the union taking place. I operated on a child the other day in whom the operation had been performed twelve months ago. The parents were anxious to have it performed, but I then refused; it was done, however, but the moment the pins were removed the lip turned out as before. You continually see patients sent back at the hospital till the proper period has arrived.

Supposing that the fissure is simple, and everything is right and proper as it regards health, the operation may be performed by a

very easy process. The instruments employed are, or ought to be, exceedingly simple. Here are all sorts of complicated instruments made for holding the lip, but, depend upon it, the fingers are the best forceps. With the fingers and a knife, such as the one I show you, you make the incision, whatever the nature of the hare-lip may be. Here is a drawing of two children who were brought to have the operation performed. What mischief might be done by operating on such objects as these. They often do not live, and it is, therefore, better to let them go on as they are for a time. You do not put them in a better condition to live, even though the operation succeeds, and this is by no means a certainty, as I have said, in mere infants. If they die the operation is saved, but if they live you can then do something to remedy the deformity by uniting the fissures. If you have a simple fissure on which to operate, you wrap the patient well round with a table-cloth, or jack-towel, so that he cannot move. You have him held on the nurse's knee, place yourself in a good light, and fix the child's head betwixt your own knees, with his head towards you. Then laying hold of the edge of the lip with the fingers, you enter the knife above the angle of the fissure, and carrying it downwards, free from the continuation of the prolabium, you take care to remove all that portion of the lip. You pare off a considerable thickness of the parts, so as to get a broad surface to oppose to the opposite side. You enter the knife again, carry it down on the other side, and bring it out where I have done. The operation is now so far completed. You have some little bleeding, which you can arrest by the fingers, but you do not care for its instant cessation. You immediately put in the needles for the twisted suture in the way I described yesterday, and these are also of the simplest kind. I have here various sorts of forceps which are used to lay hold of the lip; and then there is an instrument for introducing the pins which used to be called a *porte-aiguille*. Five and twenty years ago no surgeon would have thought himself prepared to encounter a common and single case of hare-lip unless fortified by this armamentarium. Having introduced the needle you make two points of suture, secure them by a thick twisted thread, and cut off the ends of the pins.

If there is a double hare-lip, the operation must be regulated altogether by the size of the intermediate flap. In many old books, those of Heister, Benjamin, Bell, &c., and even in Mr. Cooper's "First Lines," it is recommended that the operation should be performed on one side, and that one fissure being united, and the cure consolidated, many weeks or months afterwards the other should be operated upon. But there is no occasion for anything of the kind; if there are two fissures, you complete the operation at once. Sometimes it is necessary to take away a portion of bone which projects forward, and pushes the flap out of its place. Before you can get the soft parts together you must detach the flap, and with a pair of cutting pliers clip away the bone, perhaps with a couple of the incisors. There are many specimens in the museum of portions so

removed. In cases of bad double hare-lip, however, there is generally a deficiency of the bones, and that you cannot very well remedy. There is no mode of filling up the space. Sometimes the fissure of the palate runs quite forward to the fissure of the lip, and there is a great void into which you can pass the little finger between the bones of the palate. With the palate, however, I have nothing to do at present. Your object is to put the external parts neatly together; if the flap is in its proper place, good and well; if not, you take away a portion of the bone. If the flap is sufficiently large, you will make the incision thus:—You begin above the fissure and carry it down to the free margin of the lip; you make another incision, and carry that down also, and then do the same on the other side. Sometimes you make the incision in the median line, bring it to a point, approximate the edges, and merely thrust a pin through the upper portion. Sometimes you can get a portion of the prolabium to come down to a level with the lip, and if you can do this so much the better. Having effected your incisions, you push the pins right across, and unite the two fissures at once, by the same twisted sutures. This answers better than doing the thing by halves; you make the parts smoother. The great object is to have the prolabium straight, and all the incisions are made with that view. Both the incisions must be made of the same length to prevent puckering. You must take away the rounded portions; for if you do not, you leave an awkward-looking notch. Many patients have been operated upon for hare-lip in early life that had better have been left alone. I operate two or three times every year, sometimes much oftener, where the operation has been performed before. In these cases you must cut through the lip, remove the cicatrix, and put the parts handsomely together, guarding against any notch being left at the free edge of the lip. I had a young lady under my care, in the neighbourhood of the hospital, two or three years ago, who had a split palate, and who had been operated upon for hare-lip very soon after birth. I advised her strongly to have the cicatrix cut out, and the parts again put together. She consented, and such was the change produced in her appearance, that, some days after the operation, on stirring the fire, and rising suddenly before a mirror, she started back, not knowing herself. I advise you, when you put in your first pin, to twist your ligature upon it; do not take away the ends, but give them to an assistant to hold, and then put in the other pin. It is not often that these are required.

Lancet, Aug. 17, 1844, *p.* 629.

71.—CONDYLOMA, A PRIMARY FORM OF VENEREAL DISEASE IDENTICAL WITH SIBBENS.

By David Skae, M.D., F.R.C.S., &c.

The flat and whitish elevations of the skin occurring on the verge of the anus, on the perinæum, labia, or scrotum, and occasionally on

the thighs, or even in the axillæ, and known under the names of *condylomata, tubercules, muqueuses,* &c., are in this country generally ascribed to one of two causes. By some of our most distinguished writers they are ascribed to inattention to cleanliness in persons labouring under chronic discharges from the genital organs. "These soft excrescences," says Dr. Adams, "arise sometimes in consequence of a discharge from the rectum stimulating the neighbouring parts to ulceration. If such ulcers are prevented from healing by the discharge continuing, or by the friction of the parts, they must either ulcerate deeper and wider, or the cuticle will send out processes to defend them. These, on account of the pressure they receive, grow in various shapes, from which they have acquired their names.

"They will arise from a venereal origin in two ways. If a secondary ulcer is seated in these parts, that ulcer, having no power of healing itself, will take the character above described from the nature of the parts. Sometimes, also, the matter of gonorrhœa, by falling from the vagina along the perinæum, will produce ulceration, and the same consequences follow."

By others these condylomata are believed to be identical with the scaly eruption which follows the true syphilitic sore, modified in its appearance by the situation where it occurs. "When the eruption," says Mr. Carmichael, speaking of the scaly syphilitic eruption, "affects a skin which is opposed by another skin, as between the nates, or between the scrotum and thigh, or under the arms, or between the thighs, it is not scaly; but the skin becomes elevated into a moist, soft, flat, or somewhat convex surface, which discharges a whitish matter. These are the appearances which, I believe, in authors are termed condylomata, fici, cristæ, mariscæ, &c.—denominations applied according to their figure, or perhaps the fancy of the practitioner."

The opinion last cited is the one generally adopted by most of our systematic writers on surgery regarding condylomata. By M. Ricord and other continental writers they are arranged with the secondary symptoms of syphilis. With pretty extensive opportunities of observation in the Lock Hospital of this city, I myself entertained the opinion for some years, that condyloma was a consequence of filth and protracted gonorrhœal or leucorrhœal discharges; nor is it surprising, for in a great number of the cases—and they always constitute a large proportion of those under treatment in the hospital—these condylomatous excrescences are seen in females who either have had, or are at the time labouring under, chronic discharges from the uterus or vagina.

In 1835, the late Dr. Wallace of Dublin, in a series of clinical lectures published in the Lancet, announced some new views regarding the nature of these excrescences, or, to speak more correctly, of this peculiar eruption. He was the first to point out that it was almost invariably associated with a certain group of symptoms of a peculiar and definite character. Of this group the most remarkable

pointed out by him was a peculiar morbid state of the mucous surface of the lips, cheeks, palatine arches, or tonsils. This morbid state consisted in peculiar white elevated patches, having the appearance of parts touched with nitrate of silver, or coated with milk; these patches are more or less elevated, irregular in form, and presenting occasionally superficial ulcerations on their surface.

Dr. Wallace further pointed out that these spots were associated with, or rather preceded in general by, an exanthematous eruption of a mottled appearance, and of a red or brownish colour, sometimes preceded by vesication or scaliness, but never by pustules; sometimes elevated and approaching in appearance, in various parts of the skin, to the mucous tubercles or condylomata commonly observed on the genital organs, and producing in the folds of the skin (as between the fingers, &c.) those linear ulcerations called rhagades; under the nails, onyxis; in the head, &c., falling of the hair.

From these and other facts, he inferred that condylomata, and the peculiar patches on the mucous membrane of the mouth and fauces, were parts of the same exanthema, modified in appearance by the tissue where they appeared, and constituting a group of "constitutional," to use his own words, "or secondary venereal symptoms, of which condylomata, rhagades, onyxis, falling of the hair, and a peculiar state of disease of the mucous membrane of the mouth, are the most remarkable." To this group of symptoms he gave the name of "exanthematic primary syphilis."

He further asserted, that it could be propagated by inoculation and by simple contagion, and that it did not differ in its origin from syphilis, but resulted from a peculiar modification of the syphilitic virus from its having passed through the system. "The exanthematous group of venereal eruptions," he says, "are produced by *secondary matter*, or by matter originally derived from the common pustular primary sore, and *subsequently* modified by passing through the system."

After the extensive series of experiments performed by M. Ricord with the matter of secondary syphilitic sores and eruptions, and the verification of his results in the hands of others, it can scarcely be doubted that it is impossible to produce a venereal sore of any kind, much less the peculiar group of symptoms described by Dr. Wallace, by inoculation with matter so modified. I do not say that it is impossible to reproduce condyloma by inoculation from the matter of *a condyloma*, but that there is no evidence that condyloma can be produced by inoculation with the matter derived from an undoubted *secondary syphilitic* ulcer or eruption.

[Another view of the subject is now becoming prevalent on the continent, viz., "that condyloma is a primary form of venereal disease, distinct from both gonorrhœa and syphilis, but equally definite and specific in its character with the latter affliction." Dr. Skae having had his attention directed to this subject, investigated a great number of cases at the Lock Hospital.]

The appearances presented on the genital organs and parts in the immediate neighbourhood, were moist, indurated, and somewhat elevated patches, of a whitish and occasionally yellowish white colour. Most of these patches were irregular in form, but a considerable number of them, especially of those on the labia and thighs, were rounded and prominent. They were situated most frequently along the opposite margins of the labia majora, on the perinæum, and verge of the anus; less frequently on the outer surfaces of the labia and adjacent surface of the thighs, and on opposite and corresponding surfaces of the thighs, two or three inches below the labia. Many of them were the seats of superficial ulceration, or more frequently of vesication, the surface of the condyloma discharging a thin muco-purulent secretion. Those which were situated on the opposite sides of the nates were less elevated, and presented a tendency to ulcerate in fissures as they approached the verge of the anus.

In two instances, three or four considerable condylomatous patches, white and elevated, although flat, were seen extending over the inner surface of the vagina as high as the cervix uteri.

In nearly all the patients, the mouth or fauces presented the appearances described by Dr. Wallace as characteristic of this affection. These consisted in white and slightly elevated patches on the inner surface of the lips or angles of the mouth or cheeks; more frequently on the tonsils or arch of the palate; and not unfrequently on the tongue, sometimes on its edges, and sometimes on the dorsal surface near its root. So constant was the appearance of these milk-like patches on one or other of these parts, that I was in the habit, latterly, of examining the mouth and throat first after noticing the husky voice of the patient, and almost invariably was able to detect some patch which enabled me to prognosticate that she was affected with condyloma of the genital organs before an examination was made. And in cases of condylomata of the genital organs, where the mouth or throat did not present these appearances at the period of admission, they were not unfrequently apparent soon after during the progress of the case. To this circumstance is to be attributed the fact to be immediately noticed, that in the journal of the cases rather less than one-half of the patients are noted as having had the throat affected.

In one or two instances only, and those were cases seen at an early stage of the affection, was the cutaneous eruption, described by Dr. Wallace as a concomitant of the disease, observed. In those cases it presented the red-brown stain, the irregular form, and the tendency to scale off, or rather to desquamate, which seem to have been regarded by him as characteristic.

In only one instance did there exist a distinct condyloma in parts of the body other than those enumerated. This occurred in the case of a patient who presented a very large condylomatous patch in the left axilla.

Of the 36 cases, one or two were apparently complicated with

syphilitic sores, as I was led to believe by the production of a pustule after inoculation, which had the appearance of those produced by inoculation from the true syphilitic chancre; others were complicated with gonorrhœa, as was proved by the history of its invasion and the appearances presented; and others were complicated with a leucorrhœal discharge, as we ascertained by the use of the speculum.

My treatment consisted chiefly in the application of stimulants to the condylomata; the use of astringent injections and cold washing, for the cure of the vaginal and uterine discharges; and in cases of the latter kind, the internal administration of tincture of cantharides. In several cases, when there existed cutaneous eruptions, the iodide of potassium was given. In no instance was any mercury administered, except in the case of the woman affected with iritis.

The local application which I have found most advantageous is the sulphate of copper. The condylomata were rubbed pretty freely with a crystal of this salt, moistened with water, every second day, and in some cases daily; and a lotion of it, containing two or three grains in each ounce of water, was kept applied by the patient. Under this treatment the condylomatous excrescences disappeared with remarkable rapidity. In the cases where there were ulcers suspected to be syphilitic, these were touched occasionally with the nitrate of silver. The patches in the mouth were repeatedly touched with the sulphate of copper or nitrate of silver, more frequently with the former, and disappeared with equal rapidity with those on the labia and perinæum.

Although the treatment in the Lock Hospital has been thus almost exclusively local, in such cases, for six or seven years, I have not remarked any tendency in the disease to recur after having been cured by this simple method of treatment; nor have the patients, although many of them have been under treatment for subsequent affections, presented any secondary symptoms, except occasionally some of the eruptions mentioned in the previous description. The facility with which the cases under my care were cured, I attribute, in a good measure, not only to the effect of the remedies employed, but to the altered habits and circumstances of the patients. The regularity of the diet, the plain and wholesome food, the suspension of the universal habit of drinking, the attention to cleanliness, the rest enjoyed, and removal from night air, constant exposure, excitement, and fatigue, must in themselves, contrasted with the usual habits of prostitutes, tend to produce a marked effect on the diseases under which they may labour.

The observations recorded in the preceding pages have led me to the conclusion that this affection is a *primary form of venereal disease*, and that it is identical with *sibbens*.

[*Sibbens* was a disease which, at one time, ravaged Scotland to a great extent, but is now almost extinct.]

Dr. Gilchrist, in an account published in 1765, of sibbens as it appeared in Scotland at a time when it was very prevalent, says, "It

first appeared here in the form of a sore throat, or an inflammation of the *uvula* or *pap of the hawse*, as it is termed, and neighbouring parts. The tonsils were often superficially ulcerated, appearing either raw or covered with a *white slough*. Frequently there was a thrush, that is, *white specks and sloughs*, upon the roof of the mouth and inside of the cheeks and lips, which commonly showed itself at the corners of the mouth, in a *small rising of the skin*, of a *pearl or whey colour*." * * *

"Sometimes there was a hoarseness."—"Scabby eruptions were often met with on the scalp, forehead, inside of the thighs, groins, and parts contiguous."—"The whole surface of the body appeared mottled or flaked, of a dusky copper colour, or dirty red."—"Inflammation, sorenesses, and excrescences about the fundament were frequent."

[Dr. Skae ends his interesting paper with the following conclusions :—]

1. That condyloma is a primary form of venereal disease—specific in its characters and its origin, and distinct from gonorrhœa or syphilis.
2. That it is identical with the disease described under the name of sibbens or sivvens.
3. That it is communicable by contagion and inoculation.
4. That the difficulty of producing it by direct inoculation, and the similarity of the affection of the mouth in cases produced by sexual intercourse with that in which it has been supposed to be produced by contact of the lips, &c., render it probable that the affection of the mouth is always a constitutional symptom resulted from a venereal origin.
5. That it is curable without the use of mercury.

Northern Journal of Medicine, June, 1844, *p.* 89.

[Dr. Rose Cormack, in his "Contributions to Pathology, Therapeutics, and Forensic Medicine," says, on the treatment of this affection—]

The cases already detailed, show how useful the bi-chloride of mercury is in the treatment of this disease. If given in small and often repeated doses, dissolved in a large quantity of water, the complete remedial effect of the medicine is obtained, without any unpleasant effects being produced, as I can testify from my experience of it in many cases of various diseases. By doses of the one-twelfth of a grain repeated every three hours, I have seen cured very obstinate skin diseases of various kinds. I strongly recommend those who may use corrosive sublimate as a medicine, to prescribe it in the way I have mentioned. I have often given it in larger doses with good effect ; but I have not seen increased therapeutic action, though frequent disagreeable consequences, from exceeding the small doses which I have recommended. All irritant poisons, when given as medicines, should invariably be administered

very largely diluted. This is much better than giving them after meals, as some physicians recommend. Corrosive sublimate baths are admitted even by those who use them, to be hazardous and uncertain, especially from the varying quantity of saline ingredients generally mingled in them.

The warm bath is an admirable remedy in most skin diseases, and one never to be neglected, if possible, in the treatment of the various forms of condyloma; but let unmedicated hot water be used for it, and let the dangerous drug be administered *internally*, in well considered and carefully apportioned doses; or let it be applied by *fomentation*, the same precaution being used.

Besides corrosive sublimate, there are several valuable therapeutic agents which may be given internally in the treatment of condyloma. As the chief of these I would mention hydriodate of potash. In protracted cases, assistance may be derived from the ioduret of iron, the tartrate of antimony and potash, &c.

I generally prescribe three grains of the hydriodate of potash to be taken in twenty-four hours, in four or six doses, each being dissolved in several ounces of water, with or without infusion of gentian. In giving the ioduret of iron, I have hitherto only made trial of the syrup of the Edinburgh College. When the skin remains harsh and hard, I suspend other internal remedies, and give for a few days, four or six doses daily of the 20th of a grain of tartar emetic, in a draught of water. A larger quantity might excite nausea, and interfere with the feeding of the patient, which is generally far from desirable.

In addition to the general constitutional treatment, local applications are signally useful, though I do not think they are by any means indispensable in mild cases, if cleanliness be duly enforced. Nitric acid and chlorinated soda lotions of various strength, creasote in the form of ointment, (gtt.x–xx ad ℥j) pitch ointment, and the acid tar liquid are the best I know of.

Lond. and Edin. M. J. of M. S., Sept., 1844, *p.* 767.

72.—ON CONGENITAL SYPHILIS.

By W. Campbell, M.D., Consulting Physician-Accoucheur to the Edinburgh Maternity Charity, Lecturer on Midwifery, &c.

[Dr. Campbell differs from some of our most respectable authorities, among whom he names Mr. Acton, in his views on this subject. He thinks that syphilis, imperfectly eradicated from the system of the father, may so infect the offspring while in utero, as to cause its death; or, if born alive, it may have evidences of disease at, or some time after, birth. He brings forward the following cases as illustrations.]

In 1823, I was requested to attend, in her second confinement, Mrs. C., the lady of one of my brethren, then six months advanced

in her pregnancy; and in a few weeks thereafter she was delivered of a male child, which lived only eight hours. It presented no morbid appearance, nor was its development less than that of other fœtuses whose residence *in utero* was of similar duration. No cause was assigned for the premature labour; and I was now informed that in her previous confinement the birth was also premature, and that the infant survived only a few hours. In the summer of 1824, I again attended this lady, when labour supervened in the seventh month; but on this occasion the fœtus was dead, and from the extent of decomposition, and the information derived from the parent, life must have been extinct for more than ten days.

After these repeated misfortunes I resolved on an inquiry, from which, owing to its delicate nature and the respectability of the party, I had hitherto been deterred. The gentleman was a young physician, and I ascertained that about six months previous to his marriage with a young and amiable lady, he contracted what appeared to himself and another junior member of the profession, a chancre. After employing the usual means, and considering the disease removed, he married. At the period of this investigation there was not in either parent the least evidence of syphilis in any form,—nay, both the individuals enjoyed perfect health. In the foregoing case the gentleman was salivated; the lady also, as a matter of precaution, took a grain of calomel daily, for eleven days, when the gums became affected to a much greater extent than was intended. When the uterus was restored to its unimpregnated condition, this lady again conceived, advanced to the usual term of gestation without any tendency to premature uterine action, and was delivered of a vigorous male infant, free from any syphilitic taint. There was no more issue, for the father died within a year from this birth.

I shall add but one more illustration, for such cases are so familiar to those of our brethren who devote their attention to obstetric practice, that it would be superfluous to multiply them. In the autumn of 1843, I was consulted by a lady from the country, ten weeks advanced in her fourth pregnancy. Her first infant was born in the early part of the eighth month of gestation, was delicate, and lived eleven days. The delivery was attended by a profuse discharge of liquor amnii. Her second birth happened in the seventh month, the infant surviving only an hour and a half; and her third delivery happened in the sixth month, when a fœtus much decomposed was produced. After careful inquiry I satisfied myself that the lady never had any syphilitic symptoms. Before I could decide on a suitable plan of treatment, I requested an interview with the husband, from whom I learned that about 23 years previously, and 17 years before marriage, he had syphilis repeatedly; and though assured to the contrary, his impression always was that the disease had not been completely removed. These parties were apparently in perfect health. I determined on exhibiting mercury to the gentleman, and he was accordingly twice mildly salivated. But I hesita-

ted at first to order this medicine for the lady, lest the uterus might be excited, and the ovum thrown off. Proceeding, however, upon the belief, from what happened in her three former gestations, that the fœtus would be destroyed unless mercury were exhibited, and that there was a chance the medicine, under prudent management, might not occasion premature expulsion, I determined to salivate the lady also. She was twice salivated, after which she enjoyed excellent health; and until the seventh month she advanced in her pregnancy without even a tendency to premature uterine action. From this date, however, there were frequent threatenings of premature expulsion, which repeatedly required the abstraction of blood, and doses of from 80 to 100 drops sol. mur. morph. to allay them. At the close of the eighth month labour supervened, when a living, healthy, small female fœtus was produced.

Northern Journal of Medicine, May, 1844, *p.* 9.

[In answer to these views of Dr. Campbell, Mr. Acton says—]

I believe that accoucheurs are in error in attributing solely to syphilis the occurrence of abortion about the seventh month, and my reasons are the following:—

1st, In the wards of hospitals devoted to venereal female patients, labouring under secondary symptoms, abortions are not more frequently observed at the seventh month than at any other period; 2nd, These females, in spite of all moral and physical impression, frequently carry their children to the full period, and at the time of birth we meet with the infant quite healthy, or only sickening some weeks after. Such being the natural course of syphilis when observed on a large scale, I have hesitated in concluding that syphilis produces abortion at the seventh month, or that the circumstance of a child being born dead or putrid is of itself of any value in the diagnosis.

The reader must observe, that if Dr. Campbell admits syphilis as the cause of abortion in the above-cited cases, he will be obliged to believe that two parents, neither of whom have had secondary symptoms, but enjoy excellent health, will produce not syphilitic children in the sense usually understood by authors, but infants that present no recognised syphilitic symptom, unless premature confinement or a putrid fœtus be considered as such; thus excluding all other causes of abortion, and recognizing as the cause a chancre without any of its attendant sequelæ.

In the second case, he must believe that chancre, unattended by secondary symptoms, will, after seventeen years, show itself in the child, not in the ordinary forms, but in that which accoucheurs affirm is syphilis, consisting in the death of the fœtus and premature confinement. This doctrine will, I think, be at once denied by all practitioners who have allowed their patients to marry, and observed the healthy offspring of those who in early life contracted chancres not followed by secondary symptoms.

Ibid., June 1844, *p.* 115.

[Dr. Strange, of Ashton-under-Lyne, relates the following case which bears upon this subject.]

Mrs. F——, a healthy and plethoric woman of about thirty years of age, applied to me on the 13th March, 1841, under the following circumstances:—She was about eight months advanced in pregnancy of her *third* child; both of the two former births were premature, one child having been born dead and putrid, the other surviving its birth by only a few hours. On the present occasion she applied to me in order that, if possible, a similar fate might be averted from her present burden. In each of her pregnancies she had enjoyed uninterrupted good health, and had been entirely free from any of those distressing symptoms which often affect women in her state. In fact, she said that "it was her opinion that she was too well to be having children." On the supposition that plethora might be the pre-disposing cause of premature labour in these cases, I bled her pretty freely; notwithstanding, she was delivered of a dead child on the 17th, four days after. The child was well formed, and quite free from any syphilitic appearances; it seemed to have been dead about a day or two. I told her to apply to me much earlier in her next pregnancy, which she did. May 4, 1844, I again bled her, she being three months gone of her fourth pregnancy, and still healthy and plethoric; near the end of the fifth month I again bled her, and again in the middle of the seventh month. At the full time she was delivered of a living child, apparently healthy, but not plump. Six weeks after, the child exhibited indisputable evidence of a syphilitic taint. There were large copper-coloured scaly blotches on the nates, thighs, and genitals, which afterwards spread all over the trunk, arms, and face; the mucous membrane of the nose was inflamed, and discharged an ichorous mucous fluid; suffocation was often threatened from the tumefied state of the inner side of the alæ and septum nasi.

The child took the p. hydrarg. c. cretâ for about two months, with an interval, and ultimately recovered, and is now well. To the mother about eighteen pills of blue mass with aloes were given as an alterative. January 4, 1844, I delivered this woman of her fifth child, no previous bleeding or treatment having been had recourse to. It was very healthy, plump, and free from any appearance of syphilitic taint whatever, in which state it now remains. The mother, a very respectable woman, has never had either primary (to her knowledge), and certainly not secondary symptoms in her life. The husband has frequently had gonorrhœa, and had syphilis *previous* to the birth of her *third* child, but how long before could not be remembered. He, however was, as he thought, very careful in not communicating the disease to his wife, and believed himself cured of it.

Now, in what manner does this somewhat interesting case bear upon the dispute in question? Is it contended that a male parent who has at *some time* or other had syphilis, but believes himself cured

of it, is capable of communicating a syphilitic taint to the blood or to the *constitution* of a female parent, in consequence of which the offspring shall be born with indisputable marks of the disease, the mother all the while never exhibiting the slightest trace of it? Of this position the preceding case, if not a proof, is at least a great support. The question arises, however, were the three first births premature, owing to the action of the syphilitic taint of the mother upon the *child*, upon the *uterus*, upon *both*, or upon neither? If we suppose that syphilis, by causing death and putridity of the fœtus only, disposes the uterus to expel its contents, we are perplexed by one child having been born alive, though premature, previously to any of the bleedings or other treatment having been practised. If the action be exerted upon the uterus only, can we suppose that the three bleedings during the fourth pregnancy destroyed this action upon the uterus, and thus enabled the woman to go to the full period? How account, upon that supposition, for the excessive degree of syphilitic disease which affected the child in six weeks afterwards? If neither the uterus nor the fœtus be interfered with by the presence of a syphilitic taint in the mother, as Mr. Acton and others seem to affirm (at least to the extent of causing abortion), then how shall we account for the host of cases arising in *private practice*, in which abortion with a dead or syphilitic child, and the fact of one parent having had syphilis prior to or during the gestation of that fœtus, are constantly concurrent? Lastly, if we suppose that both the functions of the uterus and the life of the fœtus are either conjointly or separately interfered with by the existence of a syphilitic taint, existing in the blood of the mother during gestation, then we may easily and logically account for all the facts of the preceding and other similar cases.

1st, It cannot be contrary to our established principles of physiology to believe that a male parent, who has had syphilis at some former period, and whose constitution, although no primary symptoms any longer exist, is not cleared of the effects of the poison, may communicate to the female parent a *syphilitic taint*, that is, a morbid condition of constitution similar to that under which he himself labours; which communication is effected by the absorption of the seminal fluid, in which the morbific power exists, by the mother's system, and the subsequent corruption of her own constitution, without of necessity any primary or secondary symptoms having been induced in her.

2dly, If the first proposition be allowed, we know that a contagious disease, as small-pox, may be imbibed by the mother, and, without producing any *appearances* of it in her, may fix itself entirely upon the child, denoted by the existence of the pustules at birth. Consequently, the deposition of the whole of the virus upon the system of the child, may be equally effected in the case of syphilis.

3dly, The more or less early period of gestation at which this morbific power is communicated to the fœtus, or perhaps the more or less early period at which the continued deposition of such power

shall have arrived at a certain height, will determine the period at which abortion may take place; either in consequence of the morbid action of the uterus, or of the disease or death of the fœtus.

And, 4thly, It is quite possible that this morbific influence may be expended successively upon several fœtuses, or that the whole of it may be exhausted upon one, in such manner, that the mother's system being now freed from it, without medical treatment, a healthy and living child may at length be produced.

Ibid., Sep., 1844, *p.* 308.

73.—ON POLYPUS OF THE WOMB.

By M. Lisfranc, Paris.

[In an able notice of Lisfranc's clinical surgery in the British and Foreign Medical Review, we find some excellent and practical remarks on this subject. A polypus descending from the womb is said to be insensible, whilst an inverted uterus is very sensible. If however, a polypus descend with a covering from the inner surface of the womb, it is evident that its sensibility will be more or less retained.]

In partial inversion of the uterus, M. Lisfranc thinks favorably of the mode of examination proposed by M. Malgaigne, which we shall describe. In this affection, the bladder and a portion of the intestines are lodged in the concavity formed by the depression of the fundus of the uterus; if then, a curved catheter is passed into the bladder with its concavity downwards, and the beak of the instrument is directed to the most depending part of the bladder, its extremity will be readily felt by the finger in the vagina, if the case is one of inversion, unless, indeed, the intestines have become adherent to the womb in such a way as to prevent the catheter penetrating into the depression formed by the inverted organ, a circumstance of very rare occurrence. But M. Lisfranc thinks that the best way of discriminating between polypus and inversion of the uterus, is by a mode of examination similar to that above recommended, in the case of an intra-uterine polypus or of a commencing inversion. If we seize and depress the tumour with two fingers passed into the vagina, and then introduce the index-finger of the other hand into the rectum, no tumour can be felt through the gut above the one which is grasped in the vagina, if the case is one of inverted uterus. But if, on the contrary, we feel through the rectum, a second tumour similar in shape to the uterus, above the vaginal tumour, then this latter tumour is a polypus. In one instance, indeed; M. Lisfranc was misled by this mode of examination; he diagnosticated inversion of the uterus, but the patient having died, a small fibrous tumour was discovered implanted on the uterus, which was flattened and reduced to the tenth part of its natural size. It appears that attempts have been made to defraud the author of the honour due to this suggestion, as he subsequently "begs leave to thank the authors

who have appropriated his ideas, or with characteristic candour cited them as dating from the eleventh century." It is not stated who are the delinquents here alluded to, and we are not able to supply the omission."

M. Lisfranc has on several occasions removed by *enucleation* both polypi and fibrous tumours which were not pedunculated, whether situated completely within the cavity of the uterus, or having partly (or in the case of polypi entirely) made their way into the vagina. To use his own words, he "dwells on this important point of practice which he belives to be new." We need not occupy space in showing that the practice is not new, but as we believe M. Lisfranc has adopted it with more boldness than his predecessors, and under circumstances in which it was not previously applied, we shall give a summary of a few of the cases by which he illustrates this practice.

In one case having drawn a fibrous polypus almost entirely through the vulva, he perceived that its envelope, which consisted of a thin layer of the tissue of the uterus, was lacerated, and passing the index-finger through the rent, enucleated the tumour with the greatest facility. In another case enucleation was effected almost accidentally: M. Lisfranc, while examining a polypus, found the envelope give way beneath the nail of the index-finger, and by an easy manipulation enucleated the tumour in a few seconds. On examining the uterus immediately afterwards, he found that the part of that organ to which the polypus had been attached, had singularly contracted, that the depression caused by the tumour had diminished greatly in depth, and at least two thirds in breadth, it seemed to be diminishing while the finger was in contact with it, and in ten hours the uterus had regained its natural size, and the cervix would not admit the finger. We mention these latter facts, as we conceive they have an important bearing on the question of hemorrhage after excision of polypi. M. Lisfranc has also frequently enucleated with the nail of the index-finger, small cellulo-vascular polypi occupying the neck of the womb. In a case where a fibrous tumour as large as the clenched hand projected into the vagina, its envelope was lacerated with the nails, and the contained tumour turned out. But enucleation must generally be preceded by an exploratory incision; and by this combination of means, M. Lisfranc has removed fibrous tumours while still completely included within the cavity of the uterus. A lady was reduced almost to extremity, by protracted uterine hemorrhage caused by a fibrous tumour, which could be felt through the dilated cervix uteri. The neck of the uterus was seized with Museaux's hook, depressed almost to the vulva, and a more perfect examination being then practicable, the tumour was found to extend from the middle of the body of the uterus almost to its lower extremity, and to be lodged in its posterior wall, from which it was commencing to disengage itself. With a straight blunt-pointed bistoury passed along the forefinger, a vertical incision was slowly and cautiously made over the tumour until the finger was enabled to be insinuated beneath the envelope and complete the enucleation, which was

not accomplished without some difficulty. Occasionally enucleation may be more easily achieved by substituting a spatula for the finger. If it is necessary to enlarge the incision in order to effect the removal of the tumour, a grooved director will often guide the knife more conveniently and safely than the finger. In some cases, where the cervix uteri was insufficiently dilated, M. Lisfranc divided it anteriorly. Whenever the peduncle of a polypus is very broad, we should incise the envelope, and endeavour to enucleate the tumour; in this, however, we cannot always succeed. If the tumour is removed, the envelope sometimes contracts and cicatrizes, sometimes sloughs in whole or in part.

[The removal of polypi by *ligature* M. Lisfranc condemns in common with most French surgeons. The opinion of the Reviewer on this subject is as follows.]

In this opinion we altogether coincide, and confess our inability to understand the preference given to this method by many respectable British practitioners. It would be out of place to recapitulate the well-known and often repeated objections to the use of the ligature as compared with the operation by excision, as M. Lisfranc adds nothing to the perfectly conclusive long arguments since adduced in favour of the latter proceeding. In certain cases, however, the ligature should be employed: thus, if a polypus of moderate size is completely included within the uterus, and is implanted high up, especially at the summit of the organ, and if the symptoms imperatively demand an operation, a ligature should be applied *if its application is possible*, as it occasionally is when a sufficiently small peduncle can be detected. Or if a patient is so exsanguine, that the smallest loss of blood is to be dreaded, we should employ the ligature unless the peduncle is too thick, or unless we are unable to bring it when bulky, fairly within our reach, and pierce it with several needles, each armed with a double ligature, and thus tie it in two or more separate portions. M. Lisfranc disapproves of excising the polypus below the ligature immediately after its application, as we may be compelled to remove it in consequence of its producing serious symptoms, but when the vitality of the tumour is destroyed, as much as possible of it should be cut away.

How should we proceed if an artery is felt pulsating in the peduncle of a polypus? This question has been considered by Dupuytren, and is now discussed by M. Lisfranc, but both authors apparently deal with it merely as a matter of speculation, as neither appear to have met with a case of the kind. Dupuytren recommends excision, having previously applied a ligature of reserve to be tightened in the event of hemorrhage occurring. To this M. Lisfranc objects that the precaution would be illusory, as hemorrhage sometimes supervenes several hours after excision, and that as the ligature of reserve must of course be left loose, it would slip off were the peduncle very short, or if the peduncle, however long, consisted of the tissue of the uterus, it would probably retract to such an extent, as to escape from the ligature, a circumstance sufficiently exemplified in what has been

said respecting enucleation. In the case now under consideration, M. Lisfranc, if he determined to use a ligature, would at once tighten it so as to thoroughly strangulate the peduncle, then excise the polypus, and eight or ten hours subsequently remove the ligature. Hemorrhage, he is satisfied, need not be then apprehended, for in amputation of the neck of the uterus, the uterine arteries are often opened, and he has frequently restrained the consequent hemorrhage by plugging, but never found the bleeding return on removing the plug after five or six hours; and he has no doubt that such would be the case were an artery in the peduncle of a polypus divided. If the artery felt in the peduncle was not large, M. Lisfranc would at once perform excision, being perfectly convinced that plugging would certainly control hemorrhage, should it supervene.

In removing a polypus either by *ligature* or by *excision*, it has been much debated whether it is necessary to divide the peduncle close to the uterus, in order to prevent a return of the disease. Levret and many subsequent writers assert that the entire of the peduncle dies, no matter at what point it may have been tied. Dubois, on the contrary, is of opinion that the portion of the peduncle above the ligature dies only when the ligature is placed near its point of implantation, and that it lives when tied low down. Dupuytren too insists on the necessity of cutting the peduncle as close as possible to its insertion, as he is of opinion that any portion of it which may have been left, is very likely to grow again. This opinion, it is clear, Dupuytren founded on an erroneous view of the pathology of the disease; for we conceive that the peduncle always contains fibrous tissue, that the globular portion of the tumour in fact is connected to the womb by means of a slender fibrous stem, occupying the centre of the peduncle, a circumstance which, though it sometimes occurs, is very rare—is in truth not the rule but the exception. M. Lisfranc has occasionally been compelled to tie polypi at the centre of their longitudinal diameter, and found that the *whole* of the tumour died. In one instance, an enormous polypus filled the vagina, there was a deep circular depression at the centre of the tumour, round which a ligature was passed, in the expectation that when the lower part of the mass was removed, the residue would be more easily dealt with, but the portion above the ligature sloughed as well as that situated below it. He also witnessed several other similar cases disproving Dubois's opinion. We also find a case in which an attempt was made to excise an intra-uterine polypus, but the peduncle could not be detected, and a portion of the tumour, estimated at about half its bulk, was cut away; the part left behind, however, sloughed, and the patient recovered perfectly. It cannot, however, be denied that the tumour occasionally grows again when a portion of the peduncle has been left, and this difference of result in different cases cannot be foreseen or explained in the present state of our knowledge.

As to the after consequences of operations on uterine polypi, bad symptoms seldom supervene unless a ligature or caustic has been employed: and from the cessation of the discharges, the relief from

suffering, the return of appetite, &c. the patient imagines she is perfectly restored to health, an opinion in which the surgeon unfortunately too often coincides. This impression, if prematurely acted on, may lead to disastrous consequences, because a slight degree of subacute inflammation may latently exist, or even if it does not, yet metritis may be readily excited by early indulgence in the most moderate exercise, by any error of diet, by a chill, &c. M. Lisfranc consequently recommends that absolute rest in the horizontal posture should be observed for three weeks after operation, that the diet should be cautiously regulated for some time, and that the patient should be enjoined to resume her ordinary habits very gradually and cautiously.

[On the subect of polypus of the womb Lisfranc gives a very useful hint respecting the difficulty of making water.]

The emission of urine is greatly facilitated by passing the finger through the vagina, behind the symphysis pubis, the uterus is thus pushed back, and the compression it exerted diminished or even completely removed : the patient can herself readily practise this manœuvre. A frequent desire to pass urine commonly attends displacement of the uterus, pregnancy or simple hypertrophy of the organ ; the patient may be compelled to pass water fifteen or twenty times in the night ; M. Lisfranc has repeatedly relieved this symptom by directing a small enema, nearly cold and containing three or four grains of camphor, dissolved in yolk of egg, and a few drops of tincture of opium to be injected night and morning.

Anteversion of the Uterus.—This is universally stated to be greatly rarer than retroversion ; but M. Lisfranc, on the contrary, maintains "from hundreds, he might say thousands of observations," that it is *infinitely* more frequent, a circumstance which is, he thinks, easily explained. In common with Boyer, Dugès, and others, (to whom he does not refer,) the author attributes the affection chiefly to the weight of the anterior parietes of the uterus being increased from hypertrophy. But the anterior surface of the uterus is more exposed than the posterior surface to injury, and therefore it is much more frequently hypertrophied ; moreover, females pass urine very frequently, and thence the bladder being often empty the summit of the uterus readily falls forward, the displacement is further facilitated by the great prevalence of constipation in females, and the consequent accumulation of feces in the rectum. As to the symptoms enumerated by M. Lisfranc, we shall only advert to one not generally sufficiently dwelt on : "The patients very frequently experience considerable uneasiness in the rectum ; on examination it is ascertained that the rectum is perfectly healthy, but nevertheless it is often by no means easy to convince the patient that such is the case ; they usually persist in saying that the womb is not affected, *that the disease is situated in the anus.*"

British and Foreign Med. Rev., July, 1844, *p.* 9-26.

74.—CASES OF STRICTURE OF THE URETHRA, ILLUSTRATING THE USE OF THE LANCETTED STILLETTE.

By William Coulson, Esq., Surgeon to the Magdalen Hospital, &c.

Case 1.—J. W. Esq. (solicitor), æt. 42, had been under my care at different times during the last seven years, with stricture of the urethra. I had tried in vain the common and armed bougie; he had also at my request consulted one of the most eminent surgeons of the metropolis, but no instrument could be passed through the stricture. Under these circumstances, Mr. W. had made up his mind to try no further means. On being informed of some cases much resembling his own, in which the lancetted stillette had been tried with success, he resolved to come to town to have the instrument used on himself.

His symptoms at this time were a constant desire to void urine, attended with great pain and difficulty. The water sometimes flowed involuntarily, and when aware that it was coming he had no power to stop it. A few drops of urine generally remained in the passage, and these he was obliged to squeeze out by pressing on the perineum, or he suffered the greatest agony. There was considerable irritation of the glans penis, heat in the rectum, and pain in the back. His general health was pretty good.

Aug. 8th, 1842.—I examined the urethra, and found an impermeable stricture at the distance of five inches from the external orifice. I introduced the straight urethral perforator, and divided the stricture to the extent of half an inch. I then introduced a small wax bougie, into the divided part, and told the patient to withdraw it when he felt desire to pass his water. The patient suffered very little pain, and lost only a few drops of blood. The following is his own account.

Aug. 9th.—"I felt tolerably comfortable all night. I kept in the bougie about three hours, and afterwards made water with tolerable freedom, though immediately afterwards I experienced great pain at the end of the penis for a short time."

In the afternoon a wax bougie could be passed down the urethra five inches and a half, but not through the whole extent of the stricture. A slightly curved perforator was introduced by Mr. Stafford, and the remainder of the stricture at once divided. A No. 2 elastic gum catheter was then introduced into the bladder, and remained there all night.

Aug. 10th.—The No. 2 catheter was taken out, and replaced by a No. 4 gum-elastic one, which passed easily. Mr. W. had a shivering fit this morning, which was followed by feverish excitement. An opiate was administered as soon as the shivering came on, the patient having been provided with it in the event of this occurring: some aperient medicine was ordered to be taken in four hours: there was no local pain nor uneasiness.

Aug. 11th.—No. 4 catheter was taken out to-day, and replaced by No. 6. Has no symptom of constitutional disturbance.

Aug. 12th.—No. 6 was replaced by No. 8.

Aug. 13th.—I passed No. 11 gum-elastic catheter without much difficulty. In the evening Mr. W. withdrew the catheter according to my wish; he passed a very good night, but on the next morning, when dressing to go to church, he was seized with pain in the region of the bladder, frequent desire to pass urine, and the urine was bloody. By rest and the exhibition of small doses of morphia, these symptoms subsided towards evening. The severe symptoms which occurred on this day, are, I think, to be attributed to the too sudden increase in the size of the instrument last used.

Aug. 17th.—Since the 13th no instrument had been passed; the stream of urine is large, the urine is quite clear, and passed without pain. I introduced a No. 11 metallic bougie with ease, and retained it in the urethra for an hour. I instructed Mr. W. to introduce a bougie of this size for himself, and on the 25th of August took my leave of him, strongly advising him to pass the bougie once a week.

I received a letter from Mr. W. the latter part of last month, stating, that so great is the change, that he never remembers from the earliest days of childhood, to have experienced the comfort and relief he now enjoys. He passes regularly once a week or oftener a No. 11 metallic bougie, which he can do with ease, and retains it in the urethra for upwards of half an hour upon each introduction.

Case 2.—Mr. E., æt. 57, consulted me at my house, Sept. 5th, 1842, for difficulty in passing his water. About six months ago he contracted a gonorrhœa, and three months afterwards he observed a slight impediment in making water; this varied considerably, being worse some days than others. Within the last month these symptoms were much aggravated; his water passed in a small divided stream, and at times would even dribble away. Not being able to pass the smallest size bougie further than $5\frac{1}{2}$ inches, I at once introduced a curved lancetted stillette, and after three incisions succeeded in introducing No. 2 gum-elastic catheter into the bladder: no hæmorrhage took place, and the division of the stricture gave him very little pain. Mr. Markwick, my pupil, accompanied the patient in a cab to his residence, a distance of nearly two miles. On his arrival at home, he went to bed, and was ordered to take a dose of morphia. The catheter was retained in the bladder.

Sept. 6th.—Feels tolerably easy. The instrument was not withdrawn.

Continue the morphia, if necessary.

7th.—I passed No. 4 catheter into the bladder with ease.

8th.—Has passed a bad night, and has had considerable fever, and complains of pain along the urethra. I withdrew the instrument, which gave him immediate relief. Bowels well opened.

Ordered a dose of morphia to be taken at once, and to be repeated, if necessary, at bed-time.

After this time no instrument was retained in the urethra, but at the interval of four days I passed, four times, No. 8 wax bougie with ease.

Case 3.—I was requested by Mr. Austin, surgeon, of Red Lion Street, to see a patient who had been labouring under stricture for some years, and which had been recently much aggravated by an attack of gonorrhœa. The urine came away in the day either in drops or in a very small stream, and at night it flowed involuntarily, to the great distress and annoyance of the patient. On examining the urethra, I found a stricture six inches and a half distance from the external orifice. I tried, on several occasions, both large and small instruments, but never succeeded in passing one through the stricture.

I recommended the use of the lancetted stillette, and on the 14th October passed No. 6 curved stillette down to the stricture, and, after two divisions, was able to introduce No. 2 gum-elastic catheter. The division of the stricture was attended with very little pain, and a few drops only of blood were lost. The catheter was retained in the bladder; on the following day it slipped out, but was again introduced.

Sept. 19th.—No. 2 gum-elastic catheter was withdrawn, but a larger size could not at first be introduced. Here I may observe that no discharge had taken place from the urethra, an usual occurrence whilst the catheter is retained in the urethra, if the process of dilatation is going on.

The patient was extremely anxious for another division of the stricture, and I had actually introduced the lancetted stillette into the urethra for the purpose; but on holding the point of the instrument firmly against the stricture, it passed through the obstruction without the aid of the lancet. I then passed No. 6 silver catheter, which was retained in the bladder forty-eight hours.

21st.—No. 6 silver catheter was withdrawn, and easily replaced by No. 9 silver catheter. This instrument was only kept in the urethra for two hours.

The patient experienced very little local uneasiness, and no constitutional symptom whatever, from the treatment of the stricture, although he had been confined to his bed ten days prior, from irritation of the bladder and kidneys, caused either by cold or the local affection of the urethra.

It usually happens that a strong desire to pass urine, attended with violent straining efforts, and inability to pass more than a few drops, with a sense of fulness in the lower part of the abdomen, cause the greatest suffering to patients labouring under impermeable stricture, but in the last and first cases related incontinence of urine was the most distressing symptom.

Case 4.—Sept. 3rd, 1842, I was requested by Mr. Barringer, surgeon, of St. John Street, to see a gentleman, æt. 57, who had great difficulty in passing his water. He stated that being on a trial about eighteen years ago, he was obliged to retain his water for a considerable time, and on attempting to make water afterwards, he experienced very great difficulty and pain, from which time he was frequently obliged to pass an instrument to evacuate the bladder, as on the accession of cold, or the derangement of his health, the urine

could only be passed with very great difficulty. Within the last two or three months he had become much worse, and at the present time he makes water drop by drop, and with great pain: there is a hardened mass in the perineum extending from the scrotum to near the anus, and of the size of a man's fist. On examination per anum the prostate is found to be much enlarged. The smallest sized bougie could not be passed along the urethra further than 5½ inches.

Sept. 5th.—I introduced the curved lancetted stillette, and made two incisions, but no progress was made through the hardened mass; hæmorrhage, to the extent of five or six ounces, took place. A dose of morphia was given, and cold cloths applied to the parts.

6th.—I introduced the instrument again, and, after making three incisions, succeeded in getting down to about seven inches. No. 4 catheter was introduced, and pressure was made with it for about an hour, when it reached 8¼ inches, and was then retained for some hours, during which time the urine passed through it. Very great force was required to withdraw the instrument, and it was much bent. The morphia was continued every four hours.

7th.—Passes his water in a small stream, and with less pain. I again introduced the lancetted stillette, and succeeded in getting to the extent of eight inches, but so much force was required to withdraw the instrument that it broke; the broken portions of the instrument being kept together by means of the wire attached to the lancet; the patient observed that no vice could hold the instrument so firmly as it was held by his stricture.

The morphia to be continued.

8th.—Has passed a bad night, and had considerable fever; there is no amelioration in the stream. I endeavoured to pass a small bougie, but could not succeed. The morphia to be continued. Considerable irritation succeeded the last division of the hardened mass. I advised that no more trials should be made for the present with the lancetted stillette, but that we should wait to see if suppuration would take place. About two days after this, fluctuation was felt in the perineum, at the posterior part of the hardened mass. I opened this part, and a small quantity of purulent and urinary fluid escaped. This discharge reduced, in a slight degree, the swelling in the perineum, and relieved, for a short time, the symptoms. After the lapse of three weeks the patient was again anxious for the use of the lancetted stillette, and I advised him to see Mr. Stafford.

29th.—Mr. S. introduced the curved stillette to the extent of five inches, and made several incisions, but could make no progress through the hardened mass. The sensation produced by the propulsion of the lancet through this structure, resembled the cutting of intervertebral substance. No hæmorrhage ensued.

Oct. 2nd.—Passed a restless night: his symptoms became worse: greater difficulty in making water; pain in the region of the bladder, and considerable accession of fever.

3rd.—Nearly complete retention had now ensued; only a few drops of urine could be passed, and these with great pain. Under these circumstances I determined on cutting down on this hardened mass from the perineum. The patient being placed in the same situation as in the operation for stone, a small staff was introduced into the urethra as far as it could go, which was to the extent of five inches: an incision was made from the inferior part of the scrotum to the extent of the mass, which reached to the sphincter ani: the staff was depressed, and pushed through the divided mass, the point being near to the membranous part of the urethra. There was considerable difficulty in getting beyond this point; but by means of a long blunt-pointed lithotomy knife, the point being kept in the groove whilst the staff was pushed towards the bladder, and the rectum being guarded by the finger, the remainder of the stricture was divided, and a No. 5 silver catheter introduced into the bladder.

5th.—The patient felt greatly relieved after the operation, but diarrhœa came on, which lasted some days, and was only checked with great difficulty by large doses of camphor and opium: this, together with his previous sufferings, reduced him very much. An abscess formed above the pubes, and another on the inside of the thigh, both of which were opened, and discharged large quantities of pus.

14th.—No. 5 catheter, which had been retained in the urethra nine days, was removed, and replaced by No. 7.

18th.—No. 7 was removed, and replaced by No. 8, which was kept in for three days. Since this time the instrument has not been kept in, but a No. 10 silver catheter is passed every three or four days.

The wound in the perineum is now (November) quite healed, the patient makes water in a full stream, and his general health and strength are restored.

Case 5.—Mr. D., aged 47, applied to me for an affection of the urethra. For the last five or six months there had been a copious discharge from the urethra, scalding sensations in making water, with painful erections. The urine dribbled from him, or came away in a very fine stream, and the difficulty of passing it had of late very much increased. His general health was considerably deranged; pulse weak, countenance pale and emaciated, tongue white, and occasional shivering fits. The patient had, for the last three or four months, been under the care of a surgeon, who frequently introduced a bougie for him, and he had frequently introduced one himself, but his symptoms had not at all amended. Finding his health so much deranged, I postponed the passing of the bougie, and gave him some quinine, by the use of which his health was much improved. After a week or two I tried a small bougie, which passed with great ease. On withdrawing it, however, I found the end of the bougie smeared with fæces. I pointed this out to the patient, and informed him that the instrument had not passed into the bladder, but into the rectum. He then informed me that he had often observed the same appear-

ance. I then re-introduced a bougie, and putting the fore finger of the left hand up the rectum, felt the end of the bougie: the opening was small and valvular, for no urine passed through the rectum, nor any fæces through the urethra. He was seen by an eminent surgeon, with me, who could pass no instrument through the stricture; and, without great care, it passed through the opening into the rectum. We determined that a full-sized armed bougie should be introduced once in four or five days, and that the point of the instrument should be kept towards the upper surface of the urethra, so as to avoid its entering into the rectum. By this plan of treatment the patient recovered after four or five applications, and continues to this time quite well.

Med. Gazette, May 24, 1844, *p.* 248.

[The following case is published by Mr. J. M. Walker, of Newcastle-on-Tyne, and strengthens the opinion of the safety and efficacy of the treatment in many cases.]

J. R. W , aged 56, has had strictures in the urethra for twenty years, and for the last four has passed his urine, at various times, from four fistulous openings in the perineum; has had nothing done for four years, except once when the gentleman he was under attempted to pass a bougie for him without success. He has partial paralysis of the right side, of recent date, and his general health, for some time, has been so bad as to preclude any treatment by bougies. I proposed to him, in consequence of the miserable condition he was in, being obliged to leave his bed as often as ten times in a night, to perforate the stricture; and on the 3rd of May last, in the presence of Mr. Heath, one of the Infirmary surgeons, and my friend Mr. Miller, of this town, I proceeded in the following manner:—

The straight armed catheter, of the fashion and make recommended by Mr. Stafford, was introduced up to the stricture, which was two inches from the orifice, and from that point, for five inches, the urethra was felt as a hard cartaliginous mass; the stilette was pushed on until we obtained six inches and a half from the orifice; it was then agreed not to proceed any further that day.

On the 6th the armed curved catheter was introduced as far as we had proceeded before. Adhesions were found to have formed, but they were easily overcome. After pushing on the stilette for one inch, we again decided to rest a day.

On the 8th the same instrument was introduced up to the point we left off at on the 6th, and after a little difficulty I felt the instrument begin to glide smoothly on towards the bladder. The instrument was left in for two hours, after which time, when I called, observing the urine escaping past the instrument, I removed it. Its withdrawal was followed by a full stream, which, however, soon failed and stopped; I then introduced a catheter, and removed the remaining urine. Considerable uneasiness is felt at the seat of the prostate when the catheter is introduced, so much so as to prevent the instrument from being retained for any length of time; but as I

soon found that it was only necessary to go beyond the fistulous opening to obtain all that seemed desirable, I now used a straight catheter passed up to that point, and the urine escapes freely through it. The remaining fistulous opening will now have a chance of healing.

The operation thus performed, I believe to be unquestionably safe; I found it extremely easy of performance. Should a similar case present itself again, I should prefer using for it the straight instrument only; and probably a stilette differently constructed, by having another cutting blade in the opposite direction, so as to make a crucial incision, which would enable the catheter or bougie to pass more easily.

July 20th, "The remaining sinus is now healed, and the patient expresses himself as passing his urine in as full a stream as he ever did at any period of his life"

Medical Gazette, June 28, 1844, *p.* 441.

75.—*On Bursal Swelling of the Wrist and Palm of the Hand.* By James Syme, Esq. There are few subjects of surgical practice that have occasioned more trouble and disappointment than morbid distension of the bursa, which accompanies the flexor tendons of the fore-arm, in their course under the annular ligament of the wrist, towards the fingers. The resistance of the ligament prevents any enlargement of the bursa where lying under it; but the wrist and palm become distended, so as to occasion an unseemly swelling, and weakness of the hand. The fluid effused into the cavity is generally associated with numerous small cartilaginous-looking bodies, of a lozenge or lenticular figure.

In treating this form of ganglion, the means generally employed prove very unsatisfactory in their effect. Blisters and pressure are altogether unavailing. Punctures either heal without producing any improvement, or remain open, so as to occasion obstinate sinuses. Incisions of larger extent, caustics, and setons, have all been carefully employed with very uncertain benefit, and frequently great suffering; indeed I have known the continued irritation so induced prove fatal. As the treatment of similar derangements in other parts of the body is not attended with such troublesome consequences, the question naturally presents itself, what local peculiarity is concerned in causing the obstinacy of this particular case? The reply suggested by what has fallen within my observation is, that the constriction caused by the annular ligament produces the effect in question, by preventing the portion of bursal sac corresponding to it and the subjacent tendons from undergoing the healing process. Impressed with this conviction, I tried the following experiment, the complete success of which encourages me to hope that the method pursued will be found to afford an effectual remedy for a complaint which has hitherto proved so troublesome.

Janet Preston, aged 20, was admitted on the 13th of February, complaining of pain and weakness in her left hand. The wrist and palm of the hand were much swelled, but not discoloured, and pressure on these parts caused distinct fluctuation, with the jarring sensation that characterises effusion into the bursal sheaths. She stated that pain had been first felt about two years before, and that for the last twelve months she had had hardly any use of the hand, in consequence of the swelling, and weakness attending it.

I made a free incision from the wrist into the palm of the hand, dividing the annular ligament. This gave vent to a quantity of glairy fluid, with many small flat cartilaginous-looking bodies, and exposed to view the flexor tendons, separated and surrounded by thickened bursal membrane. The cavity was filled with dry lint, supported by a bandage moderately compressing the hand and wrist. In the subsequent treatment care was taken to prevent protrusion of the tendons, by drawing the edges of the wound together, and applying a compress over the seat of the annular ligament. Not the slightest disagreeable symptom followed the operation, and three days after it the patient was able to sew, which she had been prevented from doing for many months previously. In the course of a few weeks the wound healed, and the limb was in every respect perfectly sound.

London and Edinburgh Monthly Journal of M. S., Oct., 1844, *p.* 825.

76.—*Principles of the Treatment of Deformities.*—The principles laid down by Delpech, in his Orthomorphie, published at Paris in 1828, are comprised in the following rules:—

1st. A tendon to be divided must not be exposed; and its division should be made by turning the instrument on one side, so that the line of the incision may not be parallel to the division of the skin; without this precaution risk of exfoliation of the tendon is incurred.

2nd. Immediately after division of the tendon, the divided ends should be brought into contact with each other, and kept in this position by a suitable apparatus during the entire period necessary for their union.

3rd. Inasmuch as it can only take place by the intervention of an intermediate fibrous substance, this substance, before it has become firm, can, and should be, extended gradually and carefully, until it has assumed a degree of length equal to the shortened muscle.

4th. When this degree of extension has been effected, the parts should always be fixed in the position, and kept so until the new substance has acquired its requisite degree of consolidation.

Mr. Tamplin's Lectures, Med. Gazette, Sept. 6, 1844, *p.* 754.

77.—*On the Treatment of Buboes.*—In commenting on the process adopted by M. Regnaud of treating buboes, by first blistering, then applying a corrosive stimulant, &c., Dr. Johnson states that the plan

is needlessly complicated, and that the application of the caustic potash so as to form an eschar of sufficient depth is sufficient. He further says—]

Unquestionably the best method, as a general rule at least, of opening buboes is with caustic,—in preference to the use of the knife —and we are therefore glad to find that M. Regnaud is in the habit of adopting it: the only objection we make to his practice is as to the mode of effecting this purpose. When the abscess is once fairly open, and its surface and edges are in an unhealthy condition, few applications are so good as the Tinct. Benzoini Comp. (Friar's Balsam) applied with lint; it is an admirable detergent to foul ulcers in general. Besides its stimulating and antiseptic properties, the balsam seems to act beneficially by totally excluding the admission of the air to the sore, in consequence of the varnished coating which it forms. When the ulcer is tolerably clean, but very tardy in healing, we have seen excellent effects from covering it daily with a layer of powdered rhubarb. As a matter of course, bark and other tonics are generally required to be administered internally at the same time.

Med. Chir. Rev., July, 1844, *p.* 215.

78.—*Treatment of Lateral Curvature of the Spine.*—For many cases of this affection Mr. Stafford recommends *lateral exercise;* and for this purpose he has devised a machine, which consists of a semicircular wooden frame, resembling the platform or rocker of a hobby-horse. This frame lies on the ground on its convex surface, and the ends of a rope, which passes through two pulleys fixed in the ceiling, at a distance from each other equal to the length of the rocking frame, are attached respectively to a bar at each end of the frame. "The patient stands upon this machine, taking hold of the rope by each hand, and then rocks himself or herself backwards and forwards (from side to side, rather,) by which both the lumbar and dorsal curve are acted on laterally." Mr. Stafford has "hardly known an instance when it (lateral exercise) has not been of the greatest service." But "lateral exercise, however, will not always recover a lateral curvature. The spine is sometimes so completely distorted and the vetebral column so entirely thrown out of the centre of gravity, that the muscles have lost their power. They are so stretched on the convex, and so contracted on the concave side of the curve, that they cannot act. In such cases lateral exercise will not alone be sufficient. More must be done—the spine itself must be elongated; and the best method of accomplishing this is by gravitation of the body. To effect this object I have invented a machine by which the patient can be raised up from the ground by the upper part of the body, while the lower part hangs suspended. Hence the lower part, by its own gravitation, and by additional weights being hung round the hips, gradually elongates the spinal column, until it becomes nearly if not quite, for the time being, straight. In this manner..... he muscles on the concave side are lengthened, while those on the

convex are shortened, and allowed to contract, whereby they are both put into a more favourable position to pull back and retain the vertebræ in their situation. After the machine has been used I usually recommend the lateral exercise, as the muscles and ligaments are then in the best state to be strengthened."

The machine here mentioned is called by Mr. Stafford the "spine elongator."

British and Foreign Med. Review, July, 1844, *p.* 226.

79.—*General Laws Regulating the Displacement of Fractures.*—M. Ed. Lacroix has published an interesting and philosophical paper on this subject, to which we beg to direct the particular attention of our surgical readers. His general conclusion is, that "*The displacements of bones occur in angles which have the same sines directed in the same planes and in the same sense as the natural curves of the bones implicated.*"

Clavicle.—Displacement variable according to the point broken; *forwards* when the two external thirds are broken off from the inner thirds; *backwards* when the two inner thirds are severed from the outer third; *upwards*, so as to form an angle with its apex superior, where the seat of fracture is the middle of the bone. When the clavicle is broken in two places, one towards the sternal, the other towards the acromial extremity, the natural curves of the bone are replaced by two angular knees, one of which corresponds to each of the solutions of continuity.

Humerus.—Displacement generally *outwards*, so as to form an angle the apex of which is external when the shaft of the bone is broken, not outwards and upwards as is commonly said by writers; the inferior portion of the bone is most apt to get in front of the superior. In fracture of the inferior extremity the displacement is mostly *forwards*, and there is generally an increase of concavity inwards, of convexity outwards; the inferior portion is also very apt to *rotate outwards and inwards.*

Forearm.—Tendency to displacement, *outwards and backwards*, when both bones give way in the middle. The ulna alone fractured in its upper portion, the tendency is to displacement *backwards and outwards*; in its lower portion to displacement *forwards and inwards.* The radius having given way singly in its upper third, the tendency to displacement is inwards, to the formation of an angle, the apex of which looks inwards; the bone having yielded in the middle, the angle of displacement will regard *backwards;* and having failed in its lower third, the angle will turn *inwards and backwards.*

Femur.—Wherever seat of the fracture, the extremity of the superior portion of the bone tends to get *in front* of the inferior, and to form an angle projecting outwards.

Tibia.—When the bone is broken in its lower moiety, there is a general tendency to rotation, in which the inner malleolus becomes more anterior; and to the formation of an angle, the apex of which looks *backwards.*

Fibula.—Constant tendency to form an angle whose apex regards inwards, and more or less backwards.

Tibia and Fibula.—General tendency to the formation of an angle, with its apex turned posteriorly and internally. Less disposition to rotation than when either of the bones is broken singly.

But we must refer to the original and very ingenious paper of M. Lacroix for other and more particular information, in *Annales de la Chirurgie Française, &c.* Mars 1844.

Medical Gazette, May 17, 1844, *p.* 239.

80.—*On Enlargement of the Nose.* By Robert Liston, Esq., F.R.S., &c., &c.—[This often consists, according to Mr. Liston, of a kind of hypertrophy of the skin.]

There is a great enlargement of the follicles, some of them are so large that on opening them you can insert the point of the finger, in fact, they may often be described as a series of small encysted tumours, containing a quantity of sebaceous matter, and of different sizes.

Where these tumours only involve a portion of the skin they can be easily removed; and even where they are of a large size the whole may be taken away.

The tumour is of the simplest possible character, and if you take it away entirely there will be no reproduction of it, and if this is properly gone about there is no risk from bleeding, or from any other cause. If the tumour is extensive, involves the apex and both alæ, an incision must be made right down the median line of the nose, through the whole thickness of the diseased skin; your assistant puts his finger in the nostril and with a pair of hooked forceps and a knife you dissect the tumour from one side, and make the nose as like as possible, in size and shape, as it was before. There is often a good deal of bleeding, but you need not stop on that account. Having completed the operation on one side, you proceed with the other, and make the two sides as nearly as you can of the same shape. This may occupy some few minutes. In this peculiar tissue you cannot expect to pull the vessels out and tie them, so that if they continue to bleed very profusely, small sewing needles must be put through the bleeding points and threads tied round them, the ends of the needles are then cut short off. In general, stuffing the nostril with lint and putting on a compress and bandage will completely arrest the flow of blood. Here is a drawing of a man a short time after the operation was performed: you see how smooth the surface is, and how handsome and shapely the nose looks. You would expect that a wound of this kind, presenting so large a surface, would be long in healing; but that is not the case. At the end of a fortnight, although the whole nose has, as it were, been skinned and made raw, it will be healed over, and there will be a good and firm cicatrix. This drawing is really no exaggeration; it shows the appearance of the patient a very few weeks after the

operation had been performed. A mighty change has thus been wrought rapidly and safely, all these lumps, some as large as oranges, having been permanently got rid of. This is one of a great many cases in which I have had occasion to perform the operation.

Lancet, August 17, 1844, *p.* 627.

81.—*Treatment of Lupus, &c.* By Robert Liston, Esq.—We have to deal with ulcers of the face, and they are of different kinds. We do not often meet with simple ulceration here except from accident. Ulcers in the upper part of the body heal very rapidly; the blood flows freely away, and this is very essential to the healing process. Wounds in the upper part of the body heal in one-fourth part of the time that they do in the lower.

Many ulcers here assume a specific character, and sometimes commence from very slight injury. A man has cut himself in shaving, and the wound has become poisoned, as the saying is, somehow. Some corrosive or irritating stuff has been applied to it by accident or design, the oxide of some metal, or such a panacea as brown soap and sugar; or a small softish wart appears, or a little eruption, and from this ulceration takes place. These ulcers arise about the alæ of the nose, sometimes at the corner of the eyes, and sometimes on the cheek. Occasionally they begin as hard tubercles, and go on extending. Perhaps the sore heals at one place and spreads at another. Although these sores are troublesome to the patient and intractable, they can scarcely be looked upon as thoroughly malignant. They may go on and destroy all the parts with which they come in contact; skin, muscles, cartilages, and bones all perish before them. Cases which are neglected may proceed from bad to worse for a number of years, until scarcely any vestige of the bones of the face or their coverings is left. I have over and over again seen patients who had lost all their features, lips, nose, and eyes; nothing remained but the brain-pan and tongue, and they required to be fed by a funnel introduced over the base of this organ and into the pharynx.

These ulcers have a sharp edge; the integument around them is sometimes slightly tuberculated, and the edges are now and then, as it were, worm-eaten, but there is no inflammation around, they are glazed on the surface, and there is no appearance of granulation in them; they may continue for a great many years, causing the destruction I have mentioned without the lymphatics being at all affected, without the constitution suffering much, and without the disease appearing in other tissues or organs of the body.

These sores, however, may be made to heal by proper treatment, however extensive they may be. We had a man in the hospital lately, an honest dealer in horses, from Yorkshire, who had lost a great part of the nose, the lips, the side of the face, and one eye. The disease had been going on for a great many years; when he came in there was a sore on the cheek as large as the palm of the hand, extending in all directions, but he left with this sore not one

quarter that size, and the ulceration was, to a great extent, healed, though not entirely, and it is doubtful whether it ever will be. There being such an excessive loss of substance the remaining soft parts could not come together, so as to assist in covering the void.

Now, this affection, which has been termed lupus, or noli me tangere, or herpes exedens, &c., may be at once put a stop to by appropriate treatment. It has been supposed that internal medicines do good; arsenic is said to be efficacious, but it is by local treatment that you principally succeed. There may be some slight swelling in the part, and the parts underneath may be healed, but whenever you see the edges assume a sharp appearance they must be destroyed by an active escharotic. You may employ arsenical paste, but the constitution is apt to be dangerously affected by it. The best application is the chloride of zinc, mixed up dry, with an equal quantity of flour, and then moistened, by adding a little water to it. It must be mixed up to the consistence of bird-lime, and you may spread it on lint; but the better plan is to put it on a spatula, dip your finger in water, and then lay it on with accuracy round the sore, and then over the whole of it. It subjects the patient to some pain, but that ceases after a time, and the paste becomes elevated at the edges. You then find that an extensive slough has formed, and immediately that separates, instead of the old eating ulcer you have substituted a healthy granulating surface, the part furnishes good matter, and there is soon the commencement of cicatrisation all around. This may be done in all stages of the disease; even where the greater part of the features are destroyed you may in this way check the disease; and where the affection is not so far advanced you may destroy it altogether, and obtain a healthy cicatrix without much deformity.

The chloride of zinc used thus is a most active and effectual remedy, but it causes, as might be expected, severe pain for some hours after its application.

Lancet, Sept. 21, 1844, *p.* 775.

4 82.—*Remarks on Matico.* By Dr. JEFFREYS, Liverpool.—When applied externally, Dr. Jeffreys recommends the inner (upper?) side of the leaf as most powerful. "To leech-bites, and bleeding from cuts or other recent wounds, the *inner* side of the leaf should be pressed upon the bleeding part for a few minutes, when it will be found to possess not only an adhesive, but also a *healing* quality, not easily separated by washing the hands or other ordinary means." In bleeding from the nose, the powdered herb used as snuff has been found a very convenient mode of applying it. We subjoin the formulæ for preparing an infusion, a decoction, and a tincture.

Infusion of Matico.—Take of Matico-leaves, one ounce. Boiling water, one pint. Macerate for two hours, or until cold. Dose—Two tablespoonfuls for an adult, twice or three times daily, or oftener, if the case is a severe one or the symptoms urgent.

Decoction of Matico.—Take of Matico-leaves, one ounce; water, one pint. Boil for ten or fifteen minutes, and strain. Dose, the same as that of the infusion.

Tincture of Matico.—Take of Matico-leaves, three ounces; Proof Spirit of Wine, one pint. Digest for fourteen days, in the usual way, and filter for use. Dose—From thirty to sixty drops, in water.

Prov. Med. Journal, June 12, 1844, *p.* 161.

[By the term *inner* surface Dr. Jeffreys means the under and reticulated surface of the leaf.]

33.—*Varicocele Treated by Compression*.—[Mr. Curling publishes some cases of this description, to show the value of compression at the external ring in curing the enlarged veins. The cure seems to depend not so much on the pressure as on the removal of the hydrostatic pressure of the blood in the dilated veins by means of the presence of the moc-main truss. In one case "there was a large bunch of dilated veins above and behind the left testis. There was a dull aching pain, which became worse towards evening." The moc-main lever truss was applied day and night, so as to compress the spermatic veins at the external abdominal ring. This ended in a complete cure. Another case of the same kind is related, which was equally benefited by the compression.]

Lancet, June 15, 1844, *p.* 388.

34.—*New Instrument for Crushing Calculi in the Bladder*.—Mr. Simpson having been applied to in a case where the stone was supposed to be too large to extract without first breaking it, and the instruments that have been hitherto made having proved useless, in consequence of the difficulty, or rather impossibility, of opening the blades of the forceps after their introduction into the bladder, so as to grasp and crush the stone, partly from the great thickness of the blades, and partly from their being fixed together, has constructed the instrument described in the following lines, from which he considers it will be obvious, that, as the blades are introduced separately, and the stone may be comparatively easily crushed, the important object is attained of being enabled to break up a large stone, and extract it by fragments, without greater danger than that usually attending the ordinary operation of lithotomy.

This instrument, which is for the purpose of crushing calculi that are found to be too large to extract by the ordinary operation of lithotomy, consists of two strong, curved, flattish blades, rather more than three inches in length, which, together with the handles, makes the whole length of the instrument about fourteen inches. The blades are introduced into the bladder separately, so as to get round a large stone more easily. After the stone is seized between the blades, they are locked, or connected together by means of a button joint, something similar to that of Rigby's midwifery forceps.

They then resemble a pair of very strong, large-sized, lithotomy forceps. After the blades are locked together, a flattish bar with a male screw cut on the edges, is fixed by means of a screw to one side of the forceps, and passed through an opening made for it on the other side. On this screw, and outside the handle of the forceps, a washer is first placed, and then the handle with the female screw is put on the bar, and by turning it on the screw bar, the handles and blades are gradually closed together. Should the stone not be very hard, this power may be sufficient to crush it, but if not, a slide fits into the opening in the screw-bar that serves to close the blades. This slide fixes by means of a screw in the centre, according to the width the blades may be opened, and a drill is passed through the hole in the slide (in which a screw is cut for the purpose) and also through a swivel which is fixed at the lower part of the forceps, almost under the joint. A blunt gorget may be passed into the bladder to guide the drill, and prevent its touching any part of the wound. The handle of the drill is then turned round and round, till it arrives at a stop placed on the drill to prevent its passing beyond the ends of the blades of the forceps, and injuring the bladder, thus boring away the centre of the stone, and, consequently, considerably weakening it. The blades may then be closed by turning the handle on the screw-bar, and thus crush the stone to pieces. Should the first hole not weaken the stone sufficiently, the forceps can be opened and the stone loosed from their grasp, and by moving the stone and seizing it in a different position, bore another hole; but the probability is that, in most cases, the one hole would be quite sufficient. The stone having been broken into small pieces, they can then be extracted by the usual forceps, or scoop, in the ordinary way. The length of the incision in the bladder required to introduce and use these forceps, is not more than that usually made for the ordinary operation in the average of lithotomy cases.

There is also another pair of forceps of about the same length, but with straight blades, and made much stronger, to be used in the same manner as those already described, but so as to enable the operator to crush the stone without having recourse to the drill at all.

Lancet, May 4, 1844, *p.* 202.

85.—*On the Long Issue on the Scalp.* By Dr. Oke, Southampton. [We do not remember any cases since the publication of Dr. Wallis's paper on the subject, which have been published to corroborate his statement.*

Dr. Oke has published a case with this intention; and relying on the well known respectability of both Dr. Oke and Dr. Wallis, we think, judging from the cases already published, that, although apparently an unnecessarily severe measure, it deserves the attention of the profession.]

* See Retrospect Vol. 8, Article 72.

It consists of a long issue in the scalp, commencing from the centre of the forehead, where the hair begins to grow, and extending (in the adult) seven or eight inches backwards, in the direction of the sagittal suture. It is made thus. The integuments are *completely* divided by a scalpel, and the lips of the wound, from beginning to end, are to be kept apart, first by a thick dossil of lint soaked in turpentine, and afterwards by a double row of peas.

[Dr. Oake relates his case as follows :—]

Thomas Thompson, seven years and a half old, was attacked on the 30th of May last, with the febrile symptoms of scarlatina. On the following day the exanthem appeared. It was not accompanied with the ordinary symptom of inflamed throat, and it remained out the usual time. The next three days were marked with great febrile excitement, and the brain became involved. On the 5th of June he was delirious.

Up to this date he was attended by Dr. William Bullar, who had employed such remedies as were most suitable to the case—the mercurial treatment, leeches, blisters, &c. We now attended the child together. We agreed to blister the scalp again, to apply a bladder of ice to the forehead, and to persist in the mercurial treatment.

6th. The symptoms are in nowise improved. He is delirious, almost unconscious, frequently catching at imaginary objects. There is some degree of sensibility of the irides; but the corneæ are drawn upwards and backwards under the superior palpebræ. The pulse is intermittent and faltering.

As all ordinary remedies used under such circumstances were of no avail, as the child was fast sinking under the disease of the brain, and as the case was considered to be hopeless, Dr. William Bullar proposed the scalp issue, recommended by Dr. Wallis, as the only means left that might possibly relieve the morbid condition of the cerebral function. After a little hesitation, I assented to the proposal, and communicated it to the parents, taking care to use the term "issue," lest that of "operation," might stand in our way. They put confidence in our proceedings, and gave their consent. In the evening the issue was made in the following manner:—

The hair being shaved off, and the vertex of the child's head brought to the edge of the bed, Dr. W. Bullar began his incision where the hair of the forehead commences, and carried it backwards five inches over the track of the sagittal suture. The scalp was completely divided, and a few ounces of blood lost by the incision. The lips of the wound were kept apart by a thick dossil of lint soaked in turpentine, and strips of adhesive plaster were laid transversely over it, to keep it in its place.

All medicine, except an occasional purge, was now laid aside, and the wound dressed daily.

7th. He has been very delirious during the night, and appears nearly the same as yesterday.

8th. He has had a restless night but less delirium. There is

greater prostration, and much difficulty in rousing him from *apparent* stupor ; this, however, is ascertained to arise from deafness ; for on speaking loudly close to his ear, he answers questions correctly. There is less fever. His tongue is clean, and he begins to take food.

9th. At midnight he fell into a sound sleep, and did not wake till nine o'clock this morning. He is generally better. It is evident that the cerebral functions are being relieved. The issue is discharging.

10th. He has slept soundly the whole night, and is progressing favourably in every respect. He has completely regained his senses, and recognises every one around him. The issue continues to discharge well, and his appetite is improving.

He went on admirably till the 17th, when he became affected with the anasarcous sequelæ of scarlatina. These symptoms were soon removed by the hot air bath, which caused him to perspire profusely, and by other ordinary remedies. After this he was sent to the Isle of Wight, where he rapidly recovered. He is at this time perfectly well.

Prov. Med. Journal, Sept. 18, 1844, *p.* 384.

This remedial agent, in cerebral affections, is now "going the round of the press," to use a common expression. Dr. J. Johnson has, for more than thirty years, been in the habit of employing this species of drain in epileptic and other cerebral maladies, and has repeatedly noticed it in the pages of the Medico-Chirurgical Review. Dr. Johnson's method is more simple, and less painful than that which has lately been proposed. It consists merely in drawing a line of the kali purum along the course of the sagittal suture,—poulticing till the slough clears away—and then inserting a few threads of silk or cotton daily, imbued with the ceratum lyttæ. A purulent drain is thus established, with very little trouble, and with great benefit in obstinate cerebral affections. Mr. J. Johnson, of Rickmansworth, wore a seton of this kind for some years, under Dr. Johnson's direction.—30*th September*, 1844.

Med. Chi. Rev., Oct., 1844, *p.* 575.

86.—*Fracture of the Maxilla.* [The following case shows how severely the jaw may be injured without ultimate destruction. The connection with the soft parts was so slight that the fragment dangled loosely in the mouth, and had not the friends refused their consent it would have been removed.]

Robert M'L., aged 46. Three days ago, while the patient stood with his face turned upwards, a stone fell from a height of 100 feet, and inflicted a wound three-quarters of an inch in length, which passed through the substance of the upper lip of the left side, and fractured and detached, with the exception of slight soft connections, nearly an inch in each direction of that part of the alveolary arch of the superior maxilla into which the incisor teeth and dens cuspidatus are inserted. The eyelids are ecchymosed, and the patient is occa-

sionally incoherent. The pulse and pupils are normal. Before admission attempts had been made to retain the fragment in its situation by placing a piece of grooved wood between the teeth, and fixing the lower jaw; but during the paroxysms of insensibility the patient removed the apparatus. He continued in much the same state for several days, and either would not permit, or immediately made nugatory, any means used for the retention of the fragment *in situ*. The pulse afterwards rose, the incoherence was not diminishing, and complaints were made of headache. The bowels were freely opened; 14 ounces of blood were taken from the nape of the neck by cupping, and a cold lotion was kept constantly applied to the scalp.

The incoherence very speedily subsided after this; the fragment was then kept in its place by attaching it to the adjoining teeth by means of fine wire, and supporting it upon the teeth of the lower, pressed constantly against those of the upper, jaw. The fragment soon united, and the patient was dismissed with very little deformity.

Med. Gazette, July 26, 1844, *p.* 550.

87.—*On Atropine as a Substitute for Belladonna.* Mr. W. W. Cooper, Surgeon to the North London Ophthalmic Institution, writes as follows on this drug:—"I am desirous of drawing the attention of my professional brethren to the action of *atropine*, the essential principle of belladonna, as a substitute for that drug for dilating the pupil in cases of cataract, &c. I have now used it in a considerable number of cases with the greatest satisfaction; the proportion I have employed being two grains of atropine dissolved in a drachm of rectified spirits of wine, to seven drachms of distilled water. A colourless solution is the result, equally efficacious in its action, and much more elegant than the ordinary preparations of belladonna; a full drop placed in the eye producing speedy and complete dilatation of the pupil in the generality of cases, although, in some instances, a stronger solution may be required. I have never observed any ill effects from its use, although I have tried it in the proportion of four grains to the ounce, but I think two grains will be found to answer every purpose. I direct a drop to be used night and morning where I wish to keep up the dilatation of the pupil."

Lancet, June 8, 1844, *p.* 335.

[Mr. J. Lloyd Bullock objects to this preparation, inasmuch as it involves the necessity for the addition of spirit of wine. He recommends, therefore, the salts of atropine, which are neutral and soluble in distilled water.]

Lancet, June 15*th*, 1844, *p.* 393.

88.—*Inoculation with Strychnia in Amaurosis.* By Dr. Verlegh. The subject was a lady, twenty-seven years of age, of nervous temperament, affected with incomplete amaurosis of the left eye, and commencement of the same disease in

the right one. The disease was of three months' standing, and of rheumatic origin; after two months' fruitless efforts, Dr. Verlegh tried inoculation with the sulphate of strychnia in the neighbourhood of the orbit. A grain of the salt was dissolved in two drops of water; the first day 12 inoculations were performed, six above the eye in the course of the supra-orbital nerve, six under, and on the side of the nose where the ethmoidal filaments and nasal branch terminate, and whence arise the filaments which go to the iris. There was no effect that day; but next day some slight tremors occurred in the neighbourhood of the inoculated spots. After two days' rest the inoculations were repeated, and the number of punctures increased to 18. The patient now become sensible of a slight haziness. After five successive inoculations carried to the length of 30 punctures, she commenced to distinguish objects; after the eighth, vision was completely restored; the contraction of the pupil gradually increased, and the other symptoms diminished after five grains of the sulphate had been used; during the same time inoculations were had recourse to in the neighbourhood of the right eye; after the lapse of two months the patient continued perfectly restored; and this the author conceived sufficiently long, to warrant him, in considering the cure as permanent.—*Gazetta Medica di Milano, April*, 1844.

London and Edinburgh Monthly Journal of Med. Sci., Aug., 1844, *p.* 713.

89.—*Tunod's System of Dry-cupping.* At a meeting of the south western branch of the Provincial Medical Association at Plymouth, "Dr. Marsden exhibited an apparatus, the invention of a M. Tunod for exhausting the air over a large surface. It was made of copper, in the shape of a boot, and is applied as one, having an indian rubber top to tie round the thigh, and render it air tight. The air is then exhausted with a syringe. By the application of this apparatus, the leg may be distended to double its ordinary size, the pulse is at first quickened, but is gradually reduced both in frequency and strength, and even syncope may surpervene; very little pain attends the operation. After the removal of the apparatus, the blood gradually returns to its course, and in a couple of hours the swelling of the leg subsides. Experience has proved that sixty operations on the same leg, with one or two days interval, may be attended with no injurious effects to the nervous system. Dr. Marsden, after describing an establishment under the superintendence of Dr. Bonnard, of Paris, entirely devoted to the application of this instrument, and having dwelt upon the success attending its employment by Dr. Cerise, another Parisian physician, detailed the histories of several cases in which he had himself witnessed beneficial results,—as in amaurosis, deafness, sore-throat, chlorosis, amenorrhœa, croup, phthisis, &c.

Prov. Med. Journal, July 10, 1844, *p.* 224.

90.—*On Solutions of Lead in Inflammations of the Eye.*—[These applications ought never to be recommended, as it too often happens that

" when a solution of a salt of lead is applied to the surface of the eye it immediately undergoes decomposition, so that an insoluble precipitate of chloride of lead is thrown down, which attaches itself to any excoriated or ulcerated spot of the conjunctiva or cornea, adhering thereto tenaciously, and in the healing of the spot becoming permanently and indelibly imbedded in the cicatrix. Even Goulard water applied to an ulcer of the cornea is very liable to produce a chalk white opaque cicatrix." These remarks are ably confirmed by Dr. Jacob, in the 5th vol. of the Dublin Hospital Reports.]

British and For. Med. Rev. Oct. 1844, *p.* 407.

91.—*Treatment of Sinuses when situated under Corns.*.—Mr. Cæsar Hawkins in one of his clinical lectures relates the following case, which is not uncommon. Thomas Nicklin, æt. 43, was admitted last week, May 15th, with a sinus at the under part of the right heel, leading deeply down towards the under part of the os calcis ; a probe passed along it does not strike on exposed bone. The skin and parts around the sinus are very much thickened ; the surface of the cavity is pale and without granulations. It came from cold, sixteen or eighteen months ago, as a small hole in the skin, with discharge of matter. There are some other notes relating to his health, which I will not read to you, as they are irrelevant to the remarks I am going to make.

Now I believe that this has been, in reality, a case of suppuration in a bursa under a large corn ; and, without being aware of it, you will easily fail to recognise such a case ; and yet you see, by this man's abscess, which burst a year and a half ago, that there must be some reason for so small a cavity not healing in this time ; and this reason is, the peculiar nature of the bursa, which is incapable of forming granulations ; and here, as the orifice is larger than usual, you can see the inner surface, which is pale, and thin and white. Such a bursa not unfrequently forms under a corn, to defend the ligaments and joints from its pressure, either in this situation, or under the ball of the great toe, or under the metacarpal joint of the little toe ; and is liable to suppurate, and discharge by a small orifice, with a hard margin : on inserting a probe, you occasionally find that the ulceration has extended in the contrary direction also, and has destroyed the periosteum of the bone, or has even opened a joint, so that bone is felt by the probe, which exfoliates, or the joint is ultimately quite anchylosed. A similar appearance is thus produced to what you can see in another patient admitted on the same day, with anchylosis of a part of the joint of the metacarpal bone of the great toe with the first phalanx, while dead bone is felt in both of the exposed surfaces.

What I have found it necessary to do, in such a case as this, is to enlarge the orifice, and if it is necessary, destroy the whole of the inner surface with strong nitric acid, inserted by means of a little sharpened piece of wood ; then you will succeed in procuring a gra-

nulating surface, and you can afterwards apply common remedies—red precipitate, solution of caustic or copper, and so on. You should, at the same time, cut away as much of the thickened cuticle or corn as you can from around the opening. The nitric acid gives little pain to the bursal surface, and is quite effectual in general. If the cavity or sinus is close to bone, or to a joint, you must apply the caustic somewhat carefully, in order not to affect those parts ; or if the bone is already denuded, the acid may be applied to its surface also, and, partly by its stimulant quality, and partly by its chemical action on the bone, this part will probably be absorbed, or become healthy, and heal up. Two or three applications of the acid are, from this cause, sometimes necessary, in order to avoid the mischief endangered by the too free application of it in the first instance.

Med. Gazette, May 31, 1844, *p.* 278.

92.—*Caoutchouc as a Remedy for Tooth-ache.*—Caoutchouc, becoming very smooth and viscous by the action of fire, has been proposed by Dr. Rolffs, as an excellent remedy for filling hollow teeth, and alleviating the tooth-ache proceeding from that defect. A piece of caoutchouc is to be put on a wire, then melted at the flame of a candle and pressed, while warm, into the hollow tooth, and the pain will disappear instantly. The cavity of the tooth should first be cleaned out with a piece of cotton. In consequence of the viscosity and adhesiveness of the caoutchouc, the air is completely prevented from coming into contact with the denuded nerve, and thus, the cause of the toothe-ache is destroyed.

Med. Times, Sep. 14, 1844, *p.* 488.

93.—*On the Styptic Power of Ergot.*—[Mr. Liston, in his lectures on surgery, relates the following case to show the efficacy of this medicine as a styptic—] Mr. Wright, of Nottingham, an excellent surgeon, told me of a case in which a strong decoction of the herb proved immediately efficacious in a case of very profuse and alarming bleeding. The case was a very odd one. A man in the country had been suspected of unfaithfulness to his wife, and she caught him at last in the embraces of another woman. She was in a great rage, snatched up his fowling-piece, which he had put down in the room, loaded, and when he had got fairly upon his legs, she presented it at him, and blew away one half of his face. He went on recovering very well, for a time, from this dreadful and dangerous wound, but one day very profuse hæmorrhage took place. The wound was so extensive that it was impossible to say where the blood came from ; it was doubtful whether even the ligature of one carotid would suffice. Knowing the powerful astringent effects of the ergot, Mr. W. begged of Dr. Sibson, the intelligent and active resident medical officer, to have a decoction of the remedy injected into the wound, and amongst the ethmoid cells, and some dossils of lint, soaked in the decoction applied to the wound. It had the effect of instantly stopping the

bleeding; a clot was formed, there was no recurrence of it, and the case did very well. The oil of ergot is, as I have said, reputed to be very effectual as a styptic, and I shall certainly use it on the first favourable opportunity that presents itself.

Lancet, Aug. 31, 1844, *p.* 691.

94.—*Creasote in certain Diseases of the Conjunctiva and Cornea.*—Dr. Tanesville first used this remedy in diseases of the eyes in 1836, in a case of opacity of the cornea, with ulceration resulting from scrofulous ophthalmia, which was from three to four years' standing. After failing with all the known means, he used mercurial ointment, with which he incorporated a few drops of creasote, and introduced a small quantity of it between the eyelids evening and morning. This treatment was followed by rapid amelioration. The ulcers cicatrized gradually, the opacity disappeared, and in the space of two months the patient was cured. Dr. T. has since used it with the greatest success in many other cases of acute and chronic scrofulous ophthalmia. He says that he has applied it very usefully also as a topical remedy in several external scrofulous affections, ulcerations of the skin, &c., whence he concludes that it is an invaluable means in all local affections of scrofulous origin. He observes, however, that it should be employed conjointly with a suitable constitutional treatment. Simple cerate may be substituted for the mercurial ointment or fresh lard, and this is indispensable in cases where mercurial ointment cannot be borne by the patients. The use of creasote becomes more requisite in proportion as the disease is more chronic. Dr. H. Tanesville generally uses from ten to twenty drops of creasote to the ounce of ointment, but in protracted cases he exceeds this quantity. If the introduction of this ointment should produce too violent a smarting, it may be moderated by bathing the eye with fresh water or cold milk. One of the most important advantages of creasote, used as caustic in scrofulous ulcerations of the cornea, is its facility of application. It is sufficient to introduce a small portion of the prepared ointment between the eyelids, and to rub the latter slightly against the globe of the eye, whereas touching the little ulcers themselves with the caustic is a matter of some difficulty in children. This ointment is very efficacious also in curing inflammation of the Meibomian glands. It is also used with success in chronic vascular albugo, which is often the result of granular inflammation of the conjunctiva. In its simple form it is used only after the inflammatory symptoms have been removed by the ordinary antiphlogistics. In purulent ophthalmia it is employed conjointly with a general active treatment.

Medical Times, June 22, 1844, *p.* 250.

95.—*Creasote in Burns.*—Creasote is one of the most valuable of those remedies which the ancient writers designated as *incarnatives*, *i. e.* promoting cicatrisation. M. Mascharpa has drawn the attention

of his countrymen (Gazetta Medica di Milano) to its excellent effects in this respect, as an application to many ulcers. He has used it also in several cases of burns with the most satisfactory results : it soothes the pain of the injury at the time, and accelerates the subsequent progress of the cure. The best mode of using it is in the form of lotion,—made by adding twenty or thirty drops of it to two or three ounces of water, and applied with pledgets of linen to the injured surface.

The London Pharmacopœia, in its last edition, contains an "Unguentum Creasoti," prepared with half a drachm of the oil to an ounce of lard ; it is applicable for the same purpose as the solution of the oil in water.

Med. Chir. Rev., July, 1844, *p.* 219.

96.—*Treatment of Secondary and Tertiary Syphilis.*—M. Devergie one of the physicians of the St. Louis Hospital, which receives a much larger number of syphilitic patients than any of the other hospitals in Paris—has, for the last eight years, met with great success, he informs us, in the treatment of the secondary and tertiary affections by adopting the following remedies. The patient is to drink every day about a quart of a sudorific ptisan, in which from five to twenty grains of the ioduret of potash have been dissolved, and also to take every morning, fasting, a pill composed of guiac, opium and a minute quantity of the corrosive sublimate. In the course of a week or so, a second pill is to be taken at night also. These medicines are to be persevered with for two or even three months, without intermission. A tepid bath is to be taken once a week. No wine is allowed ; but milk is given freely instead. If the patient's constitution has been much damaged by irregularity or want, M. Devergie recommends the use of some ferruginous preparation, or of bark, or of both together ; at the same time diminishing the dose of the sublimate, if the state of the symptoms should still require its continuance.

When, after six or seven weeks' use of these remedies, the local symptoms still exhibit an unhealthy character, the application of the crystallized acid nitrate of mercury—dissolved in water, to which a few drops of nitric acid have been added—will be found most convenient. The ointment of the proto-ioduret of mercury is also a valuable application, to promote the healing of certain ulcers.

Med. Chi. Rev. July, 1844, *p.* 215.

97.—*Transplantation of the Cornea.* By Dr. Kissam.—An Irishman, 35 years of age, with one eye completely destroyed, and the other suffering from staphyloma, with adhering iris, was the subject of this case. As transplantation of the cornea appeared the only mode of relief which afforded any chance of recovery of vision, that operation was resolved on. The cornea to be transplanted was obtained from a pig six months old ; but before it could be cut from the

animal, it was found necessary to extract the whole eye from its socket. The central portion of the cornea, nearly half as large as the thumb nail, was cut out, placed on the end of a cork, and two ligatures passed through its margins at opposite sides.

With Beer's cataract knife, the necessary portion of the protruding opaque cornea of the patient was removed, the pig's cornea laid over the aperture in the eye, and secured in its position by the two ligatures which were on a line with the angle of the tarsi. The ligatures were cut short and the eyelids closed. On separating the eyelids twenty-four hours afterwards, violent chemosis was found to have occurred; but in twelve hours more this had so far subsided as to allow the state of the eye to be ascertained. As the transplanted cornea was found adherent, the ligatures were removed. The chemosis was so great that the raised conjunctiva served as a cushion to protect the transplanted cornea from the irritation of the moving tarsi; but, more important still, it overlapped the transplanted cornea, and thus secured it in its place. This perhaps contributed to secure the adhesion, as, instead of cut edge being united to cut edge, the transplanted cornea was applied over the margins of the patient's cornea, so that its cut surface was lying over the conjunctival surface.

The vision was improved immediately after the operation, but as the humours themselves were found diseased, it was still imperfect. The cornea continued transparent for a fortnight, when it became opaque; and in the course of a month it was absorbed. The operation was performed in the autumn of 1838, in the presence of Drs. Paul, Roberts, J. B. Kissam, and Pratt.

Ed. Med. and S. J. July 1844. *p.* 258.

[M. Feldmann has written a second memoir on the above subject in which 'he details the results of twenty experiments made in the laboratory of M. Flourens, at the Jardin des Plantes. The conclusions at which he arrives, relative to this operation, are the following:'—]

1. The union of the transplanted cornea, with that of the eye operated on, takes place either by the first or second intention, or partly by both. When the margins of the cornea are in contact, or only separated by a very trifling space, union takes place by the first intention. In this last case a distinct plastic exudation, furnished by the neighbouring parts, but especially by the iris, unites the margins of the cornea. Union by the second intention takes place when the margins of the cornea are separated a considerable distance from each other.

2. The vascular connection, when the cornea unites by the first intention, takes place in the following manner:—One or more large vessels proceeding from the conjunctiva advance to the edge of the transparent cornea. The blood from these vessels is then seen to penetrate the new cornea, either by forming new vessels through it,

or by filling the old ones, till then invisible. It always happens that at first these vessels are excessively fine, and have a radiated or arborescent distribution relative to the main trunk.

3. The transparency of the transplanted cornea, which subsists for a few days after the operation, disappears afterwards. The cornea changes its colour in proportion as the vascular apparatus is more fully developed within it; it ends by becoming more or less opaque.

4. The aqueous humour, lost during the operation, is quickly reproduced, so as in some cases to swell out the transplanted cornea to a globular form shortly after the operation.

5. When a part of the cornea floats, as it were, in the purulent matters, secreted by the neighbouring parts, and the eyelids are allowed to rub over its detached margin, it becomes softened, and soon loses its conjunctival covering. The cornea never in this case adheres.

6. The cornea, after it has been fairly transplanted, ends by becoming shrivelled and useless, in consequence of the absorption of half or more of its extent. It sometimes becomes flattened, sometimes globular. The points of cicatrization adhere to the iris.

Edinburgh Med. and Surg. Journal, July, 1844, *p.* 259.

98.—*On the Injection of Sulphate of Lead into the Bladder, for the Decomposition of Phosphatic Calculi.*—Dr. Hoskins in a paper read before the Medical and Chirurgical Society, recommends the injection of weak solutions of certain salts of lead into the bladder, for the decomposition of phosphatic calculi. These salts act in destroying concretions by a process of double decomposition, whereby the active agent of the decomponent is liberated gradually, and neutralised by the earthy basis of the calculus, before it can come in contact with the living tissues, and the solutions are therefore easily borne as injections by the coats of the bladder. The salt which he first employed was the nitro-saccharate of lead, but he has since substituted the acetate, and he describes the particular mode of using it. The experience of the cases which he records establishes, he thinks, two facts,—first, that the presence of the injection is tolerated by the bladder, and that it acts as a sedative, besides coagulating the mucus so abundantly found in these cases into short, curdy flakes, easily passed through the urethra; and, secondly, that a chemical action takes place on the calculi. He believes that where a surgical operation is inadmissible, this plan of treatment will be of avail for relief, if not for cure; for smoothing away asperities, and removing the outward phosphatic coating of calculi, so as to bring them within the range of the crushing forceps; in short, for partial, if not for entire, disintegration. The latter, he thinks, is more likely to happen when layers composed of the urate or oxalite are bound together by phosphatic cement. He also directs particular attention to one of the cases, where a considerable quantity of calcareous matter was

removed from the prostatic portion of the urethra by the injection acting on calculi which were found lodged in that part.

Mr. Solly said that he had used the solution recommended by Dr. Hoskins, and he had found it not so unirritating an application as had been represented. The case in which he had employed this injection was certainly a very aggravated one, for the bladder was much diseased, and the urine contained a quantity of mucus, and of the phosphates. In addition to these circumstances the patient had submitted to lithotrity ten times. Nothing but the great sufferings of the patient, and his anxiety to be relieved from them, would have induced him (Mr. Solly) to operate. Previously to operating the bladder was injected by means of the double canula, with simple water; this produced no inconvenience, but the subsequent injection of the lead solution, for four or five days successively, produced so much irritation that the proceeding was obliged to be dispensed with. Nitric acid, which had always before relieved him, was now injected, and his sufferings were somewhat mitigated. Lithotomy was afterwards performed in the usual way, the man did well, and made a perfect recovery.

Dr. Willis alluded to the indefinite results which appeared to have followed the use of the injection by Dr. Hoskins. The solution did not appear, however, to be without its use, though its beneficial effects seemed to be restricted to its influence on the phosphates. We were still, however, left without any chemical solvent for uric acid and other calculi; but even on this head he should not despair, for an Hungarian experimentalist had lately discovered that lithium had a remarkable affinity for uric acid, and that a urate of lithium was quickly formed when it came in contact with a substance containing uric acid. This might prove a valuable fact in practice. With respect to the operation of lithotrity, this, on its first performance, was vaunted as an infallible proceeding, and one that was never attended with unfortunate results. Experience, however, had taught the profession that this operation could be regarded as applicable only to those cases in which the stone was small and the bladder healthy.

Mr. Charles Hawkins had seen a great number of cases, of late years, in which lithotrity had been performed by Sir B. Brodie. So far from this proceeding being confined to the cases mentioned by Dr. Willis, he (Mr. Hawkins) had seen many instances in which the stone was of very large size, and the bladder in such a state of disease that lithotomy was considered unadvisable. In one case, in which the urine was loaded with posphates and mucus, and the patient had been unable to evacuate the bladder for two years without the aid of the catheter, the operation of lithotrity acted like a charm, immediate relief was obtained, and the patient was soon restored to society, although, previous to the operation, he had not left his bed for many months. The phosphatic deposit returned in the urine, a stone formed, and was again removed, successfully, by the operation. Small fragments left in the bladder, in patients with

enlarged prostate, might become nuclei for the formation of fresh stones. He alluded to the case of a gentleman, nearly seventy years of age, from whom a triple-phosphate calculus was removed by lithotrity, but in whom the urine still continued to contain a quantity of ropy mucus. Nothing like a stone could be detected in the bladder. Nitric acid was now injected into that organ by means of the double gold canula. There was less phosphatic deposit in the urine, and the patient was so much relieved that he returned into the country. The symptoms, however, again returned, and, increasing in severity, the bladder was again sounded, and a stone readily detected. This was removed. Its nucleus was so small a fragment, that he (Mr. Hawkins) had frequently seen much larger ones discharged by the urethra. As to lithotrity, and its value, he had seen sixty cases, during the last few years, and of these scarcely one was unsuccessful. In only one case, indeed, did he recollect a fatal termination, and in this case the patient died before all the fragments were removed from the bladder. He had, within the last three years, seen only two cases in which the operation of lithotrity was contraindicated. In one, the operation was begun, but discontinued, and in both instances the patients died, one from malignant disease of the rectum, and the other had a large oxalate of lime calculus, the most difficult of all forms of stone to be removed by this proceeding, for it usually broke into sharp-edged fragments, which produced excruciating pain in their passage through the urethra. If the solution recommended by Dr. Hoskins could either remove or prevent the secretion of mucus it would prove a most valuable aid in therapeutics.

Mr. Bransby Cooper considered that the solution of Dr. Hoskins might relieve irritability of the bladder consequent upon the presence of a stone, but that the operation of lithotomy, or lithotrity, must be resorted to to effect a cure. He looked upon lithotrity with a less favourable eye than the last speaker. The latter operation could not be resorted to with propriety in any case in which the bladder could not contain and retain six or eight ounces of fluid during the performance of the operation. The mucous membrane of the bladder might be injured should the fluid escape during the proceeding. Patients suffered less from the calculus of oxalate of lime than from the phosphatic variety, notwithstanding the hardness and gravity of the concretion, but in these cases we should not resort to lithotrity on account of the brittleness of the stone, and the angular forms of its fractured portions. He had operated for lithotomy one hundred and ten times, and he had found that the patients affected with oxalate of lime calculus had made the best and quickest recoveries.

Lancet, June 22, 1844, *p.* 426.

99.—*On Digitalis as a Local Remedy.*—[In an interesting "Summary of the Scientific Transactions of the Sheffield Medical Society, by J. Law, Esq., we find many most excellent and practical hints

among the rest a paper by Mr. Jackson, on the local use of digitalis.]

It appears that Mr. H. Jackson has been in the habit, from the commencement of his professional life, of applying digitalis, in the form of a liniment made with the powdered leaves and honey, first, to scrofulous ulcers generally, where the bones are not affected; secondly, to those ulcerations about the joints, in which the bones are frequently implicated; and thirdly, to scrofulous sores, directly depending on disease of bone. When there is an excess of inflammatory action, digitalis acts partly as a sedative and partly on the capillaries, improving the character of the discharge, and substituting pus for glairy mucus. The late Dr. Younge and the late Mr. Jackson, of Sheffield, induced the author of the paper to use this remedy. The writings of Dr. H. Holland, Dr. Withering, Parkinson, and Brande were referred to, for the purpose of showing that the properties of digitalis are not generally known. Mr. Turton observed that he had found digitalis useful in subduing the inflammation of ulcers depending on debility; that Dr. Younge obtained his information from Dr. Aikin, and that the botanical writings of Churchill contained a great deal of information on this subject. Mr. Thomas said that in disease of the spongy bones, digitalis was useful, but only in allaying inflammatory action; and that, according to his experience, an ointment was as efficacious as a liniment made with honey.

Prov. Med. Journal, June 12, 1844, *p.* 150.

100.—*Prestat's Adhesive Plaster.*—The following composition is said never to crack, and not to inflame the skin:—Empl. Diachyl. Gum., 400 grs., Purified Rosin, 50 grs., Tereb. Venet., 38 grs., are mixed together at a gentle heat, and then 12 grs. of Gum Mastic, and 12 grs. of Gum Ammoniac incorporated, and the mass spread on linen. In winter it is advisable to add 10 grs. more turpentine, and 12 grs. of Ol. Amygdal.

London and Edinburgh M. J. of M. S., Oct., 1844, *p* 879.

101.—*On the different Cements to Stuff Decayed Teeth.*—By Dr. Buchner.

1. *Ordinary Tooth Cement*—Is generally formed of a very concentrated etherial, or alcoholic solution of gum sandarac, mastic, dammar, colophony, &c., in the proportion of one-third of the solvent to two-thirds of the resins by weight. A very usual formula is: sandarac, twelve parts; mastic, six parts; amber powder, one part, to six parts of ether. This preparation is a balsam of the consistence of copaiba; it readily dries on exposure to the atmosphere, but remains for some time soft and compressible. The mass yields, with alcohol, a milk-white solution, the turbidity depending on the masticine which is precipitated.

2. *Gauger's Tooth Balsam (Balsamum Odontalgicum)*—Is chiefly in use in St. Petersburg. The recipe is as follows:—Dissolve ℥ij of picked mastic in ℥iij of absolute alcohol. Pour the solution into a bottle capable of containing two pounds, and add of dried balsam of tolu ℥ix. Promote the solution by a gentle heat, and frequently shake the stoppered bottle. When the latter substance is dissolved, place the whole in a warm situation, to allow the undissolved particles to deposit. This balsam is viscid, and forms, when exposed to the air, a firm mass, which is neither acted upon by the saliva nor by other watery liquids. To prevent tooth-ache arising from exposure of the nerve, the decayed tooth should be well dried by means of cotton or blotting-paper, and a piece of cotton wool imbued with the balsam is to be carefully inserted into the cavity.

3. *Vienna Tooth Cement.*—Herr V. Wirth, apothecary of Vienna, first conceived the happy idea of mixing with a viscid alcoholic solution of the resins powdered *asbestos*, which perfectly supplies the place of the pledget of cotton. His preparation is generally sold along with a tincture for cleansing the hollow teeth, and allaying tooth-ache. The latter tincture consists of an alcoholic solution of guaiacum and myrrh with acetic ether. Ostermaier, an apothecary at Munich, analysed this nostrum, and has perfectly succeeded in preparing it, but we are not at liberty to publish his recipe. It will, however, be a sufficient hint to the scientific man to be reminded that powdered West Indian copal gains considerably in solubility in spirit by exposure to moderately warm air, and that pure alcohol, to which a few drops of any essential oil are added, greatly augments its solubility.

4. *Ostermaier's Tooth Cement.*—The principle of this preparation is the formation of phosphate of lime in the cavity of the hollow tooth. For this purpose anhydrous phosphoric acid must first be formed by burning phosphorus under a large basin, fifty-eight parts of pure unslaked lime in powder, are to be mixed with forty-eight parts of this flocculent anhydrous phosphoric acid, and the necessary quantity is to be pressed into the cavity of the tooth, after the tooth has been well dried; for, if the latter proceeding be not observed, the mass will become heated, and, in expanding, fall out of its place. The application should be quickly effected, for the substance becomes quite hard and useless in the course of one or two minutes.

5. *Poudre Metallique.*—A new metallic cement has been lately sold as an arcanum in Paris by this name. We have not ourselves seen the preparation, but hear that it is contained in fluid mercury, on removal of which the odour of ammonia is evolved, and the remaining metal forms a hard mass. We presume it to be a triple amalgam of ammonium, silver, and mercury, with an excess of the latter, and believe the ammonium to lose a portion of its hydrogen, which escapes as ammoniacal gas when the quicksilver is removed, whilst a portion of the silver, ammonium, and mercury remains as a firm metal in the cavity of the tooth.

Pharm. Trans., July 1, 1844, *p.* 589.

102.—*Treatment of some Obstinate Skin Diseases.* By G. M. Dangerfield, M.D., Newport.—[In the South of France, some of the most obstinate cutaneous affections are treated by what is called the "Traitement Arabique." This, however, is chiefly used when the more ordinary methods of treatmeat have failed. In cases of maculæ syphilitica, syphilitical psoriasis, idiopathic chronic eczema and psoriasis, Dr. Dangerfield has seen the treatment singularly successful. The "Traitement Arabique" consists of "pills, an electuary, a decoction, and a particular diet.]

The pills are the following :—Quicksilver, bichloride of mercury, of each half a drachm ; senna, pellatory of Spain, agaric, of each one drachm. The bichloride and quicksilver are first rubbed together, the vegetable substances are then reduced to a very fine powder, and all mixed with the mercury, until the globules have disappeared ; then made into a mass with honey, and divided into *four* or *six* grain pills. The electuary consists of—Sarsaparilla root, six ounces ; China root, three ounces ; dried nut-shells, one ounce ; cloves, two drachms. Reduce all to a fine powder, and make an electuary with honey. The decoction :—Sarsaparilla root, two ounces ; water, three pints. Boil to a quart, and strain.

The *diet*, which particularly appears to influence the treatment, consists in the patient confining himself for twenty-five, thirty, or forty days (seldom more) rigorously to the following regimen : avoiding all other substances, he shall eat only *cakes*, biscuits, and dried fruits, such as nuts, walnuts, figs, almonds, &c. To drink *no fluid of any description*, except decoction of sarsaparilla.

This severe regimen, however, cannot always be enforced in very debilitated subjects ; hence in these extreme cases, a broiled mutton-chop may be allowed once a day, but experience has shown that this has been rarely necessary. The medicines are administered in the following manner :—

A *pill* is given every night and morning, followed by a wine-glass-ful of the decoction ; an hour after the pill a drachm of the electuary, gradually increased to six drachms, is to be taken, the decoction being drunk at intervals during the day.

The mode of treatment must vary, of course, according to the age and temperament of the patient, and the intensity and duration of the disease. The practitioner must exercise his own judgment as to augmenting or diminishing the dose of the pills, when to *suspend* or recommence them ; in a word, it is for him to modify but not to diverge more than possible from the rules laid down until the disease is removed.

There is one remark I would make relative to the pills, as the cause of their requiring the constant attention of the practitioner depends upon their producing frequently, sooner or later, salivation. It has been remarked that this effect commonly depends upon their being recently prepared, and that when they have been made *two* or *three* months, such accident rarely takes place. This depends, doubtless, upon the constant contact of the bichloride with the quicksilver

and other ingredients; it becomes modified in its chemical condition, and loses more or less its corrosive qualities, and hence is more adapted for its present application.

My sole object in bringing this treatment before the profession is a desire to hear of its merits being put to the test of experience. In the few cases in which I have seen it employed (cases of maculæ syphiliticæ, syphilitical psoriasis, idiopathic chronic eczema psoriasis) it was singularly successful, after the ordinary remedies had failed, and I may remark that it has now stood the test of a considerable number of cases of the most obstinate and inveterate character in the hospitals of Montpellier and Marseilles. The most singular part of it is, that in some cases of syphilitic psoriasis, where mercury pushed to salivation, decoction of the woods, mercurial baths, nitric acid lotions, &c., had been administered without permanent benefit, the employment of the "Traitement Arabique" was successful, and that in the short space of four or five weeks. These are points for reflection, and it will be for experience to determine how far the withdrawal of all fluids from the diet, with the exception of decoction of sarsaparilla, can influence the action of the preparations of mercury, for these cases had a syphilitic origin, and mercury had been given previously a fair trial.

Lancet, July 13, 1844, *p.* 495.

103.—*Treatment of Fractures of the Clavicle.* By A. L. Cox, M. D., New York.—The difficulty of obtaining a perfect control of this fracture, by the different bandages now in use, is very generally admitted by practical surgeons. This, however, is no less certain, than that the great principles on which such control is attempted, are well ascertained and universally admitted. The action of the sterno-mastoid and great pectoral muscles, holds the sternal fragment in its proper position, while the scapular portion falls with the weight of the arm or by the action of the muscles, and is then drawn inwardly, so that the inner portion overrides the outer, and the position of the shoulder is altered from its natural state, to one more inward, downward, and forward.

The indications of treatment are, therefore, obviously to extend, elevate, and hold back the shoulder. For this purpose, surgeons formerly resorted to a figure-of-eight bandage, applied over the back between the shoulders—a plan of treatment liable to the objection, that it does not meet all the proper indications of the case, and does not insure a perfect restoration of the functions and configuration of the fractured shoulder.

Dessault's bandages have also been generally used, and are designed with reference to the great and acknowledged principles of the case; but it is very generally admitted that these bandages are not as successfully used as is desirable, and many surgeons have consequently returned to the old figure-of-eight bandage in preference to them. Even our schools, if I am correctly informed, teach their abandonment; a fact to be regretted, as they certainly have several

decided advantages over the more simple means now generally superseding them.

Of these, the first is the advantage of a direct and perfect extension of the fractured bone, effected by the cushion in the axilla, and the transverse turns of the roller over the arm of the fractured side, round the body, and under the armpit of the sound side. This important point of proper extension is well attained and kept by this part of Dessault's management.

The great defect, which, as far as I have been able to learn, is pretty generally admitted against the bandages in question, exists in the last bandage, the object of which is to retain the fractured shoulder in a sufficiently elevated posture.

Dessault's direction for its application is, to commence with a roller nine yards long, at the axilla of the sound side, to bring it in front of the chest over the shoulder of the fractured side, down behind the arm to the elbow, then to bring it in front of the chest to the point of beginning, then over the back from the axilla to the fractured shoulder, crossing it to the front of the arm, under the elbow, and so obliquely over the back again to the axilla of the sound side, and in this way till the roller is applied.

That this plan should fail in keeping the fractured shoulder and arm in a proper elevation, is, I think, obvious *à priori*, and unfortunately it is found to be so in practice.

The axilla is below the shoulder of the opposite side, and the bandage, therefore, exerts a direct influence to depress it just in proportion to the strictness of its application. If, indeed, the turns which are made under the elbow of the affected side could be brought over the shoulder of the sound side, thus making the sound shoulder a *point d'appui* from which to suspend the elbow and arm of the fractured side, there would be some influence exerted toward the end in view. But when we reflect that this turn would support the elbow only by an oblique application, and that the bandage, from its yielding to the weight of the arm, could afford little or no support, thus applied, it needs but a moment's reflection to perceive that the end which the surgeon has in view is completely lost by passing the turns of the roller *under the axilla* of the unaffected side.

What has been said will, I trust, serve to prepare the reader for the suggestion which it is the object of this paper to make in the modification of Dessault's bandage.

Instead of making the axilla of the sound side the point of support of the shoulder of the fractured side, I propose that this point of support be sought close to the neck, on the side of the fracture. The roller may start from the sound axilla, pass over the other shoulder down behind the arm and under the elbow, then upward over the fracture, obliquely across the back, and under the axilla of the sound side; thus making a figure-of-eight, by which the elbow will be drawn directly upward, and the point at which the bandage crosses on the shoulder being properly secured by pins, will be retained permanently close to the neck by means of the turns which pass

under the sound axilla. This arrangement seems to possess all the properties at which the last bandage of Dessault is aimed, and of which it undoubtedly fails.

But one case has occurred to me whereby I could test the soundness of my reasoning by an appeal to practical results. This happened in an elderly woman, who fell from a chair in attempting to wind the kitchen clock. Dessault's plan failed, after careful and patient repetition; so also did the old figure-of-eight bandage, and several other modifications of them which successively suggested themselves to my mind in the management of her case.

I made the application, which I have attempted to describe above, with the best results. It retains the shoulder in its proper position, and the bones in perfect coaptation, and is at the same time comfortable to the patient. It is well to commence by preparing the arm of the affected side with a roller, carefully and accurately applied. This precaution has the double advantage of guarding the arm from the pressure of the turns of the first roller, and also of furnishing the means of fastening the last application to the elbow by means of pins.

If it shall be thought worthy of trial by the profession generally, I believe it will be found to be an improvement; and I therefore feel it to be a duty to make the suggestion, and submit it to the judgment of my medical brethren. No one can be more aware than myself of the very simple nature of the alteration in Dessault's bandage, that I have ventured to propose; but if it should be found on trial to be better adapted to attain the very ends, and to apply the very principles of practice, which Dessault taught, it will doubtless be justly appreciated by the profession.

New York J. of M. and S. May, 1844, *p.* 321.

104.—*On Spina-Bifida.* By Prescott Hewitt, Esq., Curator of St. George's Pathological Museum. Spina-bifida may, it is well known, be found in any part, either at the anterior or posterior surface, of the vertebro-sacral column; but its common situation is at the posterior part of the lumbo-sacral region.

The existence of this disease is generally explained by an arrest in the development of the osseous tissue, which, M. Cruveilhier thinks, is, in some cases, the consequence of adhesions having taken place between the integuments and the coverings of the spinal chord, before the cartilaginous tissue of the laminæ was formed; by these adhesions the chord is kept out of the canal, and consequently prevents the formation of the laminæ in the corresponding region.

The connexion which generally exists between the chord, or the nerves, and the walls of the sac, is a point of the utmost importance.

Some cases are related, by various authors, in which neither the chord nor the nerves had any connexion with the sac; these parts followed their usual course down the spinal canal; but, in by far the greater number of cases that have been placed upon record, the nerves presented some kind of connexion with the sac. Of *twenty*

preparations of spina-bifida, occupying the lumbo-sacral region, which I have examined in various collections, I have found but *one* in which the nerves were not connected with the sac.

With regard to this connexion of the nerves with the sac, it appears that the two following general rules may be laid down. 1st, if the tumour corresponds to the two or three upper lumbar vertebræ *only*, the chord itself very rarely deviates from its course, and the posterior spinal nerves are generally the only branches which have any connexion with the sac. 2d, if the tumour occupies partly the lumbar, and partly the sacral region, then, *generally, the chord itself*, and its nerves, will be found intimately connected with the sac. M. Cruveilhier believes, from his dissections, that this connexion is *constant*.

Various reasons have been assigned for this connexion of the chord with a tumour lying over the sacrum, and Morgagni enters into a long discussion about this point; but, for his suggestions, I must refer to his work, "De sed. et caus. Morb., Ep. xii." The true explanation is, that, in these cases, the disease takes place during the first month of fœtal life, when the chord is situated in the sacral canal.

For a detailed account of the various ways in which both the chord and the nerves have been found connected with the sac, I must refer to Mr. Stafford's Treatise on the Spine.

In by far the greater number of cases the fluid is found in the *sub-arachnoid* cellular tissue, the visceral arachnoid being more or less extensively stripped off from the chord and its nerves; in a few cases only, the fluid is effused into the *cavity* of the *arachnoid*. This difference in the situation of the fluid will, I think, serve to explain some of the varieties which have been observed as to the connexions of the chord, or the nerves, with the sac.

1. If the fluid is effused into the cavity of the arachnoid *previous to the formation of any adhesions between the two layers of that membrane*, no nerves will, I think, be connected with the sac; for the fluid, thus effused, accumulating at that point where it meets with the least resistance, will project at the back part of the spine, which is deficient, and pushing against the bodies of the vertebræ, the chord, and its nerves, it will serve to keep them in their proper situation.

2. In those cases where the chord and its nerves have been found passing through the cavity of the tumour, the fluid has, I think, been effused into the *sub-arachnoid* cellular tissue after *partial adhesions* had formed between the chord, with its nerves, and the two layers of the arachnoid at the posterior part; the membranes having been subsequently made, by the accumulation of the fluid, to project where the least resistance was offered, have carried backwards the adherent chord and its nerves, the anterior branches of which, having to pass to their foramina, have thus been made to intersect the cavity of the tumour.

3. If the chord and its nerves are found spread out upon the pos-

terior wall of the sac, without passing through its cavity, the fluid has been effused into the *sub-arachnoid cellular* tissue after *extensive adhesions* had firmly united the chord, or its nerves, and the two layers of the arachnoid at the posterior surface; these parts, thus united, having been subsequently forced outwards by the accumulation of the fluid which, in these instances, necessarily takes place before the chord, the anterior spinal nerves will be found running along the walls of the sac to reach their proper foramina.

If the *anterior* spinal nerves are connected with the tumour, we shall find branches going to the sac, and returning from it to reach their respective foramina, through which they always pass, to form the different plexuses; but if some of the *posterior* spinal nerves only are out of their place, they will *generally* be lost in the walls of the sac, or in the neighbourhood to which they are distributed.

The greater or lesser degree of paralysis of the inferior extremities which sometimes accompanies spina-bifida, may be generally explained by the connection of the sac with the chord and its nerves, which have, in some cases, been found soft and pulpy, and in other cases wasted, or altered in structure, by the pressure to which they have been submitted.

Several cases of persons affected with spina-bifida living beyond the adult age have been placed upon record. The walls of the sac, in these cases, generally become thickened and firm, and the tumour then remains stationary, but in one Case it will be seen that the tumour, of the size of an adult's head, has gone on increasing up to a very recent period, and that its walls, instead of being opaque and firm, were thin and transparent, so that the lad was in constant danger of having serious mischief produced, even by a slight accident. In some of these cases it has been remarked that there was more or less paralysis, either of the sphincter vesicæ or of the sphincter ani, and sometimes of both, even when the inferior extremities were well developed, and not in the least degree affected with paralysis. Such was the case in the patients whom I have mentioned.

Treatment.—The remarks which I have to make upon this point will be confined to the radical cure of this disease.

The dissections of the cases of spina-bifida which have been published, and the preparations which are to be found in our museums, at once point out the rashness of attempting to remove these tumours either by ligature or by the knife. I do not consider this remark to be in the least invalidated by the success which is said to have attended the practice of M. Dubourg, who has published in the Gazette Médicale de Paris, 1841, a paper upon the radical cure of spina-bifida. M. Dubourg operated upon three cases: in one, a ligature was applied to the tumour—the patient died two days after the operation; in the other two, which terminated successfully, the sac was removed by the knife, and the lips of the wound were brought together by hare-lip pins and sutures. The successful termination of these two cases was, it must be confessed, very fortu-

nate; but this success ought not, in my opinion to lead any surgeon to adopt so rash a practice; for, laying aside the question of thus opening the theca vertebralis, there still remains the fact that, in the majority of cases, some nerves are connected with the sac, and that, when the sac corresponds to the sacrum, the chord itself is *generally* connected with the tumour. In one of M. Dubourg's cases the tumour was in the loins; in the other it was at the lower part of the cervical region. The sacs were examined after the operation, *but no nerves were connected with them.*

Several cases, in which the plan of treatment adopted by Sir A. Cooper has completely succeeded, have been placed upon record by various authors; but in these cases two points of importance have not, I think, been sufficiently considered, and I would therefore lay down the following general rules:—

1st. The tumour ought never to be punctured along the mesial line, especially in the sacral region; for it is generally at this part that the chord and its nerves are connected with the sac. The puncture is to be made at one side of the sac, and at its lowest part, so as to diminish the risk of wounding any of the nervous branches.

2nd. The instrument ought to be a grooved needle, or a small trocar; for if a lancet is used there will be a greater risk of wounding some important part contained in the cavity of the tumour.

Med. Gazette, July 5, 1844, p. 461.

105.—*On Syphilitic Skin Diseases.* By John Rose Cormack, M.D., F.R.S.E., &c. The cutaneous eruptions which follow syphilitic contamination, though extremely various in appearance, possess some characters in common, which, if not always sufficient to distinguish them, at least materially serve, with other circumstances, to do so. Generally speaking syphilitic eruptions are secondary, *i.e.*, following the cure of the primary affection; but sometimes they appear almost simultaneously with, or very soon after it. They occur at every period of existence, from fœtal life up to old age.

Syphilitic skin diseases are scaly, papular, pustular, tubercular, exanthematous, and vesicular. They are generally of a copper colour, or dingy red, and never assume the bright hue of active inflammation. The face, forehead, upper part of the back, and shoulders are the parts upon which they most commonly appear; but they are also not very unfrequently to be met with on other situations, and there is no locality in which they have not been seen. The scaly syphilitic skin diseases usually occur uncomplicated; whereas the other forms very commonly appear together in the same individual. My belief is, that the scaly eruption follows, or is associated with condyloma only, and that when we meet with a papular, pustular, exanthematous, or vesicular eruption of a syphilitic nature in addition to the scaly, there have been two distinct primary affections,—the one proceeding from the poison of condyloma,—the other from that of chancre.

1. *Papular venereal eruptions* may be mistaken for some forms of lichen and scabies. Mere inspection is often insufficient to enable

one to distinguish positively between *lichen simplex* and *lichen syphilitica*. An inquiry into the collateral circumstances, and an observation of the progress of the case may be indispensably necessary to enable the diagnosis to be established. The venereal disease is spread over the whole, or a large part of the body, much more frequently, than the non-venereal lichen. Its nature is pointed out by the papules uniting, and becoming converted into large copper-coloured spots.

Small papules need not be mistaken for the vesicles of scabies. To make the diagnosis between itch and syphilitic lichen, careful inspection is all that is required; recollecting that the former is a vesicular, the latter a papular eruption.

2. *Pustular venereal eruptions* may be mistaken for the non-syphilitic forms of acne and ecthyma. The base of the syphilitic pustules, and often also the skin in its neighbourhood, presents a dull dingy red, or coppery aspect; whereas in non-syphilitic acne, the skin around the pustule is invariably of a decided, or even bright red colour.

3. *Exanthematous venereal eruptions* generally appear along with, or follow very soon after the primary affection. They have been mistaken for rubeola and urticaria, and *vice versa*; but the progress of the case will in every instance prevent a person of ordinary qualifications from committing such an error, or set him right should he by rashness fall into it.

4. *Vesicular venereal eruptions* are admitted by those of the most extended experience, to be very uncommon. It is well, however, to remember that venereal vesicles are stated to be distinguishable by their having a copper-coloured areola around them.

5. *Tubercular and scaly venereal eruptions* are generally the sequelæ of the primary form of condyloma. Though they invite to lengthened pathological discussion, I will not now do more than hint at some of the most important and least disputed facts regarding them. I have seen cases of what were called *psoriasis guttata* and *psoriasis gyrata* of the scrotum; and heard them pronounced by persons of experience not to be of venereal origin. The facts are too indistinct in my memory to warrant my giving the details of these cases; but I distinctly recollect that one of the patients had that peculiar affection of the throat which occurs in the course of condylomatous disease. In doubtful cases, then, it would be well to watch for the appearance of this, and also to notice from time to time, whether no little patches of the lepra of condyloma appear on any part of the body. The lepra of condyloma is easily distinguished from every other form of skin disease. The patches are smaller, more irregular, and of a more dusky hue, than those of ordinary lepra. No one who has ever seen the two diseases, and carefully marked their points of difference, will ever afterwards mistake the one for the other. *Lupus* and syphilitic ulceration of the nose are sometimes very like one another. The practical difficulty of distinguishing between them, however, is not great, as the latter is generally asso-

ciated from its commencement with disease of the periosteum and bones, or with some other well marked constitutional affection.

The treatment of these skin diseases can be very briefly stated. The diet must be carefully regulated, and the state of the bowels, skin, and kidneys, made matter of special attention. All this must be done by the simplest means which can be devised; for the system is always in a more or less irritable state, and exceedingly abhorrent of most drugs, and of all except in very moderate quantity. There are few uncomplicated cases which cannot be cured by the warm bath every second, third, or fourth night, and the internal use of corrosive sublimate, or arsenic, or both at alternate periods. Mischief in place of benefit will result from giving them in large doses. In bad cases it is always of advantage to begin the treatment by taking from three to six ounces of blood from the arm. In obstinate cases this may be repeated several times with great benefit, at intervals of eight or ten days. Hydriodate of potash is sometimes more useful than either of the remedies mentioned. It was first employed in secondary syphilis by Brera in 1821; and his example has since been followed by very many, among whom deserve special notice, Ricord, Biett, Baumés, Wallace, Sperini (of Turin), Schützemberger (of Strasburg), and Guétine (of Antwerp.) In the hands of these physicians it seems to have cured every form of secondary venereal disease. The doses and method in which it is recommended to give corrosive sublimate and hydriodate of potash, have already been mentioned by me. Of the arsenious acid, I commonly prescribe one-20th or one-24th of a grain, to be taken four times a-day or oftener, in a large draught of water, or other simple vehicle. I intended to have here introduced a series of cases, with remarks upon a variety of the local and constitutional remedies employed in the treatment of syphilitic and other skin diseases; but as this paper has already extended to a much greater length than I anticipated when I sat down to arrange my notes, I must here for the present leave this subject.

London and Edinburgh Monthly Journal of Med. Sci., Sept., 1844, *p.* 768.

106.—*On the Protective Influence of Vaccination.*—The general conclusions, drawn by Dr. Retzius of Stockholm, from his observations of small-pox and the effects of vaccination in Sweden, are these: "The protection, afforded by vaccination from the close of the second year of life against the contagion of the variolous poison, usually lasts unimpaired to the end of the thirteenth year or so; after this period it begins to lose its effect, and gradually becomes more and more uncertain on to the twentieth or twenty-first year of life. For the next four or five years, the disposition to the small-pox seems almost to have recovered its original integrity; and this state of liability continues unimpaired up to the age of forty years or so. At about this epoch of life, it begins to approach nearer and nearer to the limit of its existence—which it reaches, in the majority

of cases, about the fiftieth year,—the period when the general revolution of the human body commences to take place."

The practical inference to be drawn from these remarks is the propriety of repeating vaccination in about thirteen or fourteen years after its first performance. This advice is in accordance with the observations of the most experienced practitioners: it would be well, if it were more generally acted upon.

Med. Chir. Rev., July, 1844, *p.* 222.

107.—*A Tasteless Worm Medicine—Santonine.*—This vegetable principle, prepared from the semen contra vermes, a substance imported from the east, and long kept in the shops on the continent in very general use as a vermifuge, may be made into lozenges, and seems worthy the attention of English practitioners. Semen contra, as it is called, consists of the unexpanded flowers of several species of artemesia, mixed, perhaps, occasionally with seeds. The investigations of chemists have shown that its composition is sufficiently uniform to warrant its retention and study. An essential oil, of a strong odour and flavour, was long since prepared from it and employed as a vermifuge. This tasteless principle, santonine, was discovered by Kahler and Alms, and studied by Trommsdorf, jun. This principle is now recommended on good authority as a remedy for worms, especially lumbricales, in this form. Take

℞ Santonine, one drachm ; Sugar, five ounces ; Gum tragacanth, half a drachm. Make into 144 lozenges ; of these a child may take from five to ten daily, or santonine may be given in powder with sugar.

The occurrence of intestinal worms in children is said to be far more common in the rural parts of France than in Paris. We believe the same to be the case in the country districts of England as compared with the metropolis.

Lancet, May, 11, 1844, *p.* 226.

108.—*New Form for Steel Wine.*—M. Souberan recommends the following formula :—

℞ Tartrate of protoxide of iron, eight grains ; Tartaric acid, eight grains ; White wine, twenty ounces.

Rub the tartrate of iron and tartaric acid well together in a porcelain or glass mortar, add the white wine, and filter. It is quite obvious that the old form for preparing steel wine is most uncertain and variable in strength, depending upon the acidity of the wine employed (although left out of the last edition of the London Pharmacopœia, it is nevertheless in daily use in this country). M. Bernal recommends the wine to be agitated with a little hydrate of peroxide of iron, and filtered before adding the filings in the old form. To prepare the tartrate, decompose one equivalent of proto-

sulphate of iron with one equivalent of neutral tartrate of potass, wash the precipitate on a strainer, press it strongly, and dry it over a water bath.—*Journal de Pharmacie.*

It is obvious that a large amount of water must be used in preparing this tartrate, else sulphate of potass will be precipitated with the tartrate of Iron. Perhaps the tannate of iron which M. Beral wishes to get rid of, was the active agent in the old form of steel wine.

Lancet, May 11th, 1844, *p.* 226.

109.—*On Belladonna.*—In a paper read before the Medico Botanical Society, Mr. Ley endeavours to point out that belladonna was not of so deadly a nature, as its name and the dread entertained of it by the profession and public would lead one to suppose, and he quotes several authors to shew that a fatal result rarely attends its ingestion. He observes, that its effects are rapid and constant; therefore, if understood, most highly valuable. The difficulty is in seeing and describing them so clearly that future observers shall recognise the same results from medicinal doses. For this purpose the variety of the observations recorded, and even the varieties of language in which the narratives are clothed, become useful information for future observers to test and reject that which is least precise and perfect.

In testing the medicinal influence of a medicine by which we seek to relieve pain, spasm, irritability of system, and to procure sleep, its approximation to or secession from opium in its action on the system, will form a very good standard to judge of its effects, and tried by this test, Mr. Ley has found that the action of opium and belladonna is very similar. He has himself taken belladonna, and has frequently given it in doses from half a grain to a grain, and in describing its action, instead of saying, that it diminishes sensation, irritability, and arterial action, in the first step of its influence, he believes that it increases them all, and that the peculiar action of the remedy being exhausted, reaction takes place, and those effects (to wit, diminution of sensation, irritability, and arterial action) follow.

He observes, that soon after taking a grain of the extract, there is a peculiar taste in the mouth, and a diffused novel sensation over the whole body, which excites the attention forcibly and unpleasantly. Saliva is secreted in diminished quantity. The nervous excitement becomes absolutely painful, with restlessness, and with the attempt to move, giddiness, with an affection of the cerebrum, becomes evident. There is difficulty in swallowing, and the voice becomes hoarse, it is as though the action of the parts were impeded by the loss of the lubricatory moisture of the mucous membranes. The sight is affected, and indistinct, and the eye has the same sensation—perhaps, of coldness—that is felt over the body. The lids become dry, and the general sensation is similar to that experienced after long watching. Pain in the bowels may occur, and, perhaps,

an evacuation may take place ; but neither purging nor diuresis is caused by it. Sore throat and redness of the skin resembling scarlatina, is sometimes produced, and inordinate menstrual discharge may occur suddenly in females. The attention is so entirely absorbed by the peculiar sensation, and the irritability of system, that no pursuit can be followed. The eye can see, but is indisposed to maintain attention to the object, and the ear has sensation, and hears peculiar noises. The disposition to withdraw from all the excitement of passing influences becomes active, and the retirement, like weariness, brings repose.

In this stage of excitement, Mr. Ley observes it is not difficult to trace an increased arterial action, approaching inflammation, and this being the first and most immediate action of the remedy, we ought to reckon the rapid subsidence or evanescence of these effects among the virtues of the medicine. In Dr. Pereira's opinion, belladonna is not fitted for plethoric constitutions, nor for febrile and acute inflammatory cases, in which Mr. Ley coincides ; but, he thinks, it may be rendered so by combination with other medicines, or by preceding its use by blood-letting. It has been his habit, he says, to produce the excitement, and then allow reaction to go on undisturbed for a day or two. He expects more benefit in the second or third day of inaction, than from the immediate effect of the drug. In this way relief is experienced in scrofulous ophthalmia, in toothache, etc., when the state of excitement has passed away. A decided astringent effect is produced by the exhibition of belladonna in some chronic discharges from the mucous membranes ; the secretion in ulceration of the trachea is diminished, and the cough relieved ; various vesicular eruptions on the skin are also removed by it, and when the contents of the vesicle have become semi-purulent, and the true skin ulcerated, the ulcer being deep and devoid of healthy granulations, the edges being still under the influence of the creeping vesicle, a single grain of the extract of belladonna will annihilate the eruption, and the ulcer will immediately assume a healthy appearance. This influence is well exemplified by that affection of the finger, where the cuticle is raised by a semi-purulent fluid round the nail. The cuticle being removed, the circle will still be enlarged by the separation of fresh cuticle, and the denuded surface pours out a copious discharge. The effect of one dose of belladonna is to dry the denuded surface, and then the disease no longer exists, and this is effected with so much rapidity, as almost to seem like magic. Mr. Ley quotes two cases from Mr. Liston's practice at University College Hospital, in one of which minute doses of extract of belladonna cured an attack of erysipelas in two or three days, and, in the other, a case of small ulcerations on the leg, aggravated by a scald, and attended with much inflammation and fever, after the fever was subdued, the belladonna also speedily effected a cure. In concluding, Mr. Ley adverted to the difference presented by the extracts, as met with in the shops, and stated that he had found a stale, black, tobacco-smelling extract most efficacious for external application. This

he considers may be owing either to the mixture of the fruit with the leaves, or to the adulteration of the extract with some other drugs, and in that case he thought it would be advisable to employ the adulterating drug by itself.

Medical Times, July 13, 1844, *p.* 314.

110.—*Electro-Puncture as a Therapeutic Agent.* By Dr. Shuster. —At the French Academy of Sciences, on the 16th of January, 1843, Dr. Shuster read a paper on this subject, which terminated with the following conclusions :—

1. Electricity is useful as a therapeutic agent, only when introduced into the substance of the affected organs by means of acupuncture.

2. Galvanic electricity and the electro-magnetic fluid, when employed by acupuncture, constitute at once the most powerful and inoffensive medicinal agents which we possess.

3. The affections for the cure of which electro-puncture may be employed with success are—First, hydrocele, ascites, (idiopathic or symptomatic of curable lesions,) hydrothorax, and articular dropsies. Its use may be extended to chronic hydrocephalus, dropsy of the pericardium, and the greater part of the dropsical effusions. Second, lissomatous, steatomatous, atheromatous, melicerous, serous, and synovial cysts. Third, congestions and indurations, chiefly those of the lymphatic glands, of the testicles and epididymis, indurations of the cellular tissue, in the neighbourhood of certain kinds of ulcers, and in the walls of fistulous passages, certain indolent tumefactions ; and there would be nothing irrational in attacking cancerous affections in the same way. Fourth, goitre. Fifth, varicose dilatations, especially when the electro-puncture can be aided by rest and compression. The author does not despair to apply with advantage this treatment to aneurisms and erectile tumours. Sixth, chronic rheumatisms, neuralgia, and certain nervous diseases. Seventh, paralytic affections in general, but especially those of the retina, *(amaurosis asthénique)* and of the muscles of the voice *(mutismas paralytique)*.

4. Electro-puncture applied to the treatment of diseases acts in several ways, viz. :—First, as a direct stimulant of sensible contractility, and absorption. Second, by causing small eschars, thus as it were cauterizing, and destroying in detail a portion of the tumour. (The *cautérisation* galvanique, or *sous cutanée* of the author.) Third, by decomposing the aqueous portion of tumours. Fourth, by forming, at the will of the operator, minute openings for the exit of the fluid part of tumours. Fifth, by producing in the wall of a cyst or other cavity such a degree of inflammation as will cause obliteration by adhesion without giving rise to any inconvenience, if the patient be kept under strict surveillance. Sixth, by coagulating the blood, and causing effusion of little masses of plastic lymph into the cellular tissue.

5. The success of electro-puncture depends on the method employed.

6. Electro-puncture properly applied is, in the majority of cases, attended with slight pain only, is free from inconvenience and danger to the patient, and frequently accomplishes a cure when all other means have failed.

Lond. and Edin. M. J. of M. S., June, 1844, *p.* 510.

111.—*Iodine a Preservative against Variola.*—Dr. Schreiber states that he has found the administration of iodine useful in preventing the members of the family of a person labouring under small-pox from being infected with the same disease. The formula he used was as follows :—

℞ Hydriod. Potass, gr. viij. ; Tinct. Iod., gtt. xvi. ; Aquæ font., ℥ ij. S. A teaspoonful morning and evening.

Dr. S. invites practitioners to a further investigation of the powers of iodine in this respect.

Northern Journal of Med., July, 1844, *p.* 223.

112.—*Feeding Syphon.*—Mr. Rotch, at a meeting of the Society of Arts, held on the 6th of March, exhibited and explained a glass feeding syphon for sick rooms, by means of which the patient may be fed whilst lying in any position. The upper limb of the syphon is placed in a tumbler or other vessel, from which the liquid food is to be drawn by the patient who has the lower end in his mouth ; the upper limb is extended above the bend of the syphon, and is open at top ; so that the attendant can, by placing his finger close to the aperture, either allow the supply to be continued or cut off, at pleasure, without hastily removing the syphon from the mouth of the sick person.—*Literary Gazette.*

Prov. Med. Journal, May 22, 1844, *p.* 113.

113.—*Discolouration of the Gums from Nitrate of Silver.*—[Dr. Branson, of Sheffield, observes that when nitrate of silver has been given for some time it produces a blue discolouration of the gums, similar to the effects of lead. He says—]

In several cases of epilepsy, two being at present under treatment, and for the relief of which nitrate of silver in small doses has been prescribed for some weeks, (one grain three times in the day being the maximum dose,) I have observed a blue line on the edges of the gums close to the teeth, and not to be distinguished from that produced by the action of lead. I am far, however, from saying that the value of the blue line as a diagnostic of lead diseases is much diminished by the occurrence of a similar line after the administration of the nitrate of silver, inasmuch as the latter substance rarely finds its way into the system unless introduced medicinally. The fear of discolouration of the skin and the uncertainty of the time at which that discolouration takes place, have deterred many practitioners from giving a fair trial to the nitrate of silver in epilepsy ;

and I regard the first faint appearance of the blue line as a valuable proof of the action of the medicine, and the depth of colour of the line as affording a very useful warning, that the limit is reached beyond which it is unsafe to proceed.

Prov. Med. Journal, June 19, 1844, *p.* 177.

114.—*Squill* obviates some of the ill effects of opium. If an aperient be added besides, the good effects of opium may often be obtained when it would otherwise be inadmissible.

℞ Pulv. opii ; Pulv. scillæ, āā gr. iii. ; Aloes ; Conservæ rosæ, āā gr. ix. Fiat mass. divid. in pill. vi. æquales. Sign, opiate pills, two at bed-time.

We have remarked very beneficial results in cases of chronic ill health with tendency to dryness of the skin, from the continued use of such combinations as the following. Besides its diaphoretic effect, it should be regarded as alterative.

℞ Resinæ guaiaci ; Extract. gentianæ, āā ℥i. ; Pulv. ipecacuanhæ, gr. xv. Ft. mass. divid. in pill. xxx. æquales. Sign, tonic alterative pills, two twice a-day.

Or, if an aperient be required, aloes may be substituted for the gentian, and then the combination will somewhat resemble the pulv. aloes comp. of the London Pharmacopœia.

A simple and very effectual treatment of the less severe bowel complaints, so apt to prevail at this season, is the following :—

℞ Sulph. magnesiæ, ℥ss. ; Aquæ menthæ, ℥vi. Solve. Sign, a wine-glassful to be used at intervals of an hour, till the bowels have been distinctly acted on by the medicine, and then a pill containing one grain of opium is to be taken.

Even where the pain is considerable, and the case threatens to be severe, this simple plan often succeeds.

Northern Journal of Medicine, October, 1844, *p.* 414.

115.—*On Therapeutic Medications, &c.* By M. Raspail.—*(Extracted from his "Physiology of Health and Disease applied to Animals and Vegetables, but more especially to Man.)*—When the respiration has been interrupted or greatly vitiated, the most speedy medication alone can repair the evil ; every delay is fatal, especially in man, when the suspension of this function is not owing to syncope ; syncope, indeed, frequently lasts a long time, with all the appearances of death. The medication must be founded on the theory of each of those various accidents of which the asphyxia is the consequence.

Asphyxia by Vacuum, Strangulation, and Occlusion.—The first and the most pressing demand is to remove the obstacle which opposes itself to the introduction of the air ; to cut the cord which

strangles, or withdraw the foreign body or parasite which blocks up the trachea. An emetic, in these cases, is often successful. This result obtained, we must hasten to rub the body of the patient, the neck, between the shoulders, on the chest and abdomen with an aromatic ointment, (camphor ointment, for instance) and place a compress of *sedative* water over the region of the heart, on the cranium and around the neck. Our *sedative* water, which has ammonia for its base, has the property of penetrating speedily into the circulatory current, and there dissolving the coagulated albumen; in fact, of impregnating the blood with ammonia and sea-salt, which are two of its most powerful vehicles. We may, also, gently inflate the lungs with hot air, containing the vapour of myrrh, camphor, &c., to re-establish the respiratory movements, and obviate all tendency to decomposition. Directly the patient gives a sign of life, make him swallow hot broths and strongly spiced liquids.

Asphyxia by Submersion.—Dry the body; then bathe it with the strongest camphorated spirits. The alcohol, which passes by imbibition through the living tissues, removes from the blood the aqueous quality which it acquires from too long a stay in the water; now, the circulation is arrested as much by excess as by deficiency of its menstruum. Also, inflate the lungs with air impregnated with camphorated spirits, &c.

Asphyxia by the Vapour of Charcoal and by Acid Emanations.—Abundant lotions of the *sedative* water, so as to re-dissolve, by the vehicle of the ammonia, the congestions caused by the chemical action of the acid vapour. Constant frictions along the course of the spinal marrow, and the abdominal region, with camphorated liniment; insufflation of air rendered slightly alkaline with ammonia.

Asphyxia by Ammoniacal Gas, Sulphuretted Hydrogen and other Basic Gases.—General frictions with camphorated or aromatic vinegar; application of camphorated spirits, to absorb the aqueous portion of the blood and diminish its liquidity; acid lotions to neutralize the exaggerated effects of the alkaline vehicle, and to decompose the poisonous gases by precipitating their bases.

Acid Exhalations and Emanations; Marsh Miasmata.—In the new process of gilding by dipping, and in the manufacture of vitriol and other acids, the workman is constantly surrounded by an atmosphere of nitric or hydrochloric acid, which he respires through all his surfaces. The trades in which mercury is employed are perhaps less injurious than this. Mercury attacks the nerves; acids corrode the parietes of the intestinal canal and of the chest. The men should, here, take care to work only under low and glazed chimneys, and to be surrounded by free currents of air. They should also frequently bathe their hands with the ammoniacal water, and wear a cravat impregnated with it around the neck, so that the mouth and nose may be constantly enveloped with a vapour capable of saturating the acid emanations, and neutralising their effects. A mask might also be worn, in such cases, containing

similar antidotes. Those who labour in sewers, and on marshy grounds, should adopt similar precautions, or employ *cigarettes* containing particles of chloride of lime. The smoking of tobacco, otherwise very *hygienic*, can here serve only as a vehicle and auxiliary to the corrosive action of the acids and the miasmata. Fires on the borders of marshy grounds purify the air, not only by decomposing the chemical principles of the miasm by the flame, but also by converting them into a saponaceous compound by the essential oil, and neutralizing them by the pyroligneous acid which is disengaged.

Dietetic Precautions and Medications.—The nutriment varies according to the species, the individual, the manners and the customs. All vegetables do not flourish in the same soil; some languish where others thrive; animals are not all carnivorous; man also is not nourished, in all situations of life, in the same manner. The food of the adult would be indigestible to the infant, and that of the infant insufficient and debilitating to the youth. So also, do we find a difference between the food of the man of leisure and that of the hard-working labourer. The best diet is that which suffices our digestion and our habits. A mixture, in sufficient proportions, of glutinous substances (in the first rank of which we must place meat) and of saccharifiable bodies, forms the base of all normal food. But such a diet, serving equally to the nutriment of the animal, as of the parasites which prey upon it, requires the addition of ingredients capable of poisoning these infinitely small parasites, without producing derangement in the functions of the animal itself. These ingredients are called *seasonings* and *condiments*. Every condiment is a vermifuge or anthelminthic; it is a feeble poison, which can destroy only very small animals. I have invariably seen gastritis, diarrhœa, pains in the bowels, and a whole train of morbid symptoms, to be the inevitable consequence of an insipid, saccharine, and mucilaginous diet. This species of food is a slow poison: by dieting patients we merely substitute one disease for another. Our graziers are ignorant of the cause of that frightful mortality which ravages their cattle; yet it is easy to see that this calamity may be dated from the period when our economists advised the substitution of the grains from the distilleries, of beet-root, potatoe-peel, &c., in the place of hay. Hay has its condiment, or its anthelminthic, in the aromatic herbs which perfume it; the grains possess no condiment. Hence, those putrid or verminous fevers which so quickly carry off the milch-cows. Exercise after meals is a condiment of another kind. The sedentary or studious man digests badly; not that motion is necessary immediately after feeding; quite the contrary; repose is essential for the stomachic digestion to take place, that is to say, for the alimentary mass to be elaborated into chyme. But, as soon as the chyme passes into the duodenum, agitation becomes an auxiliary to nutrition, inasmuch as the contractions of the abdominal muscles force the bile to flow out in greater abundance, thus bringing about the transformation of the chyme into chyle, and aiding the process of the duodenal digestion. During the first hour,

therefore, after meals, remain seated and talk; then take sharp exercise for another hour, and you will thus in two different ways aid the two primary processes of digestion. Add to this, that the bitter matter of the bile is an excellent anthelmintic. Hence it is that long-continued friction alone, over the region of the liver, by aiding the flow of the bile, sometimes suffices to free us from pains in the bowels. By a contrary reason, mental labour after meals, is both painful and injurious to digestion. These two digestions, the cerebral and the stomachic, cannot go on together; the thought being elaborated merely as a product of nutrition, it is contradictory to admit that these two functions can be effected at the same period. The studious man is never more disposed to labour than when fasting; but hunger renders this disposition of short duration; and then the stomachic cavity being emptied of its condiments, which have all passed into the small intestines or the colon, the vermicular ascarides are driven upwards into the stomach, where, by their titillations, they give rise to *crudities of the stomach, cramp, sensations of hunger, &c.* The means which I have adopted to prevent these effects, is simply holding in the mouth a *cigarette* of camphor, contained in the tube of a quill, and inspiring its vapours during respiration, as also swallowing the saliva which is impregnated with it. The odour of the inspired camphor is introduced as well into the stomach, by ingurgitation and deglutition of the saliva, as into the respiratory organs. The smokers of tobacco, and I might even say of opium, defend themselves from the torments of hunger, by a similar proceeding; but their mind is less clear, by reason of narcotics not permitting, or but slightly allowing, of intellectual labour. When digestion is disturbed, perverted, suspended, or paralysed, we must evacuate the products as quickly as possible; nothing is more injurious, in our intestines, than that which is non-assimilable. Vomiting is painful, and has its ill effects; evacuants have none, provided they do not exceed the dose tolerated by the economy. I generally employ for this purpose a few grains of socotorine aloes, taken in a little soup, or anything convenient. Among the most powerful condiments which the rich man possesses, we must rank alcoholic liquors, generous wines, spirits containing the aromatic principle of canella, orange-peel, angelica root, nutmeg, vanilla, orange-flower, &c.; anthelmintic elixirs which he makes use of after each meal, to protect his digestion, at the same time that they stimulate agreeably his exhausted palate. The poor man has nothing but a small glass of brandy, which he takes in the morning, fasting, and for which he is reproached, as for a depraved taste; during the remainder of the day, he procures, for the same purpose, a little tobacco, which he smokes or chews, and for this he is accused of uncleanliness; but these habits are, in reality, hygienic. Nutrition is the laboratory of life and of development. Hunger is a poison which corrodes and destroys. What, then, should be the diet of an invalid? The best medication is that which combats the cause of the evil, without deranging the sources of life, which

seconds nutrition, and does not suspend it. If man requires for nutriment a mixture, in suitable proportions, of gluten and sugar, of what use can it be to administer simply water, holding in solution a bitter, and *non*-assimilable principle? You may by this kill the worm, or other parasite, but you will also famish the patient, and destroy him by inanition; and this the more quickly, as your ptisans shall contain less of the nutritive principle. The milk of the nurse is a sovereign remedy, and the best anthelmintic for the infant; it should never be deprived of it under any pretext, when there is no fear of infection. Nurses' milk is so good an anthelmintic, because it is, in general, the depository of all the condiments digested by the female, for the milk seems to proceed directly from the stomachic digestion; if the nurse eat garlic, the milk immediately acquires an alliaceous odour. Sea-salt is an excellent vermifuge; witness its action on the leech, which it causes immediately to disgorge the blood which it may have swallowed. All domestic animals are fond of it. The poor man, who has so few condiments within his reach, seeks it with as great avidity as domestic animals; he falls ill when he is deprived of it. Why is it that sea-scurvy is cured so readily on land, when its ravages have not extended too far? Why, also, that scurvy, and some other maladies, which are contracted on land, are cured by a long voyage at sea? The fact is, that both the one and the other are verminous diseases, and that there are some vermin belonging to salt water, and others peculiar to fresh water; that fresh water and pure air form an anthelmintic, in the first case, and salt-water, or air impregnated with sea-salt, do the same, in their turn, in the second case. Aromatics, perfumes, and resinous elixirs, are vermifuges, under either circumstance.

Med. Times, July, 20, 1844, *p.* 321.

MIDWIFERY.

116.—ON ARTIFICIAL DILATATION OF THE OS UTERI.

By John Breen, M. D., formerly Assistant Physician to the Lying-in Hospital, Dublin.

[The late Dr. Hamilton, it is well known, stated that by securing the completion of the first stage of labour within twelve or fourteen hours, no patient under his charge for the 35 years antecedent to his publication, had been above twenty-four hours in labour, and, except in cases of disproportion, none so long. We are convinced that the practice of Dr. Hamilton, supported as it now is by the experience of many eminent and practical men, has been too long neglected ; and we are happy in having the opportunity of publishing the experience of Dr. Breen, on this subject. We think, in cases of tedious labour, where the great impediment to the completion of the process is the undilated state of the os uteri, that cautious and very gradual artificial dilatation is perfectly safe and will save the patient many hours of unnecessary pain. Most of our readers will be aware of the mode adopted by Dr. Hamilton and Mr. Burns for this purpose. Dr. Breen's method is as follows. He says—]

I think artificial dilatation should not be attempted for at least ten hours after the real commencement of labour, no matter what the duration of spurious labour may have previously been. When this measure is called for the membranes will be usually found ruptured, but not universally so. Two fingers are to be introduced, either between the os uteri and unruptured membranes, or, if ruptured, between the os and presenting part of the child. The fingers are to be used either for the purpose of dilatation or as a wedge, to resist the coming down of a flap of the cervix of that viscus. Above all things it is to be particularly kept in mind that the fingers are to be quiescent except during a pain, and to be used only during the most severe portion of this action. By thus proceeding no additional suffering will be caused to the patient. About two hours will usually be found sufficient to obliterate the undilated cervix, but the attendant need not be anxious to complete this measure within so

short a time. He may occasionally cease from his trials and watch what nature may be capable of effecting. By following these rules we avoid the risk of encountering the tendency to inflammatory action, which is always to be dreaded when severe labour is complicated with a long duration of that process. When first I read Mr. Burns's opinions on this subject, now many years back, I was surprised that he did not recommend artificial dilatation to be preceded by blood-letting. This measure, though not contraindicated, will generally be found unnecessary. In thus bringing the presentation to act on the perineum within the first twenty hours of labour, or generally a shorter period, we secure such a portion of uterine action to be directed to the dilatation of this part, as if it does not absolutely terminate the expulsion of the child before danger impends, from the protraction of parturition, will render instruments compatible with the mother's and child's safety applicable. Sufficient materials exist to prove that the following of the practice advocated by Professor Hamilton, and supported in this essay, will not render obstetric practice either too artificial or meddlesome. For though nature has carefully provided a set of organs for the continuance of the human species, and for the safety of this process, yet, in a certain number of cases, all agree that artificial interference of some kind becomes absolutely necessary. Though it be true that the decree has gone forth that the woman in sorrow shall bring forth children, this is no reason why the obstetrician should not resort to the aid of art, guided by science and experience, to alleviate the suffering of his patient.

I acknowledge I am sanguine enough to expect that the practice of midwifery is capable of being so far improved that the perforator will not be used in cases uncomplicated with obstetric casualties, such as deficiency of space in the pelvis, convulsions, &c., or in cases where the prolapsus of the umbilical cord, joined with a cessation of its pulsation and other certain indications of the child's death, remove all moral objections to this always uncomfortable measure to the conscientious practitioner. In fine, I would appeal to the best-informed obstetrician if ever, in the most remote vista of future improvement, he perceives any probability of banishing from practice what in a former part of this paper I have called the *opprobrium obstetricorum*, except through the adoption of Mr. Burns's and Professor Hamilton's mode of acting in labour likely to be tedious. No person can doubt that I have added to the Edinburgh professor's authority additional facts bearing on the subject, and supporting the safety of the practice. Let no practitioner, on merely speculative grounds, reject a mode of conducting a labour which mitigates the sufferings of his patient, and much lessens the danger of inflammatory action or debility succeeding parturition,—the first rendering the use of every instrumental aid dangerous, and the second very generally proving fatal.

Lancet, *May* 11, 1844, *p.* 217.

117.—*On the Mechanical Dilatation of the Os Uteri.* From a practical paper read before the Edinburgh Medico-Chirurgical Society lately, by Professor Simpson, on mechanical dilatation of the os and cervix uteri, we extract the following passage :—"Lastly, Dr. Simpson offered some observations on the introduction of the sponge tent into the os of the pregnant uterus, in certain conditions in connection with abortion, and as a means of inducing premature labour. When abortion was inevitable, and the hæmorrhage great, a small expanding sponge tent passed into the os uteri was more effectual than a large vaginal plug. It at the same time opened up the os uteri, so as to allow of the more easy escape of the contents, whilst uterine contractions were, in most instances, ultimately induced by its presence. For the same reasons it was often a valuable means of both opening up the os uteri, and exciting the necessary degree of uterine action in those occasionally perplexing cases where, in abortion, the embryo escapes, but the secundines are long retained. Dr. S. had employed the same simple means in inducing premature labour, and spoke of the advantages of it in comparison with the various other measures that had been proposed for that object. He found that the tent, when made and introduced in the mode already stated, required no vaginal plug, or other means to hold it *in situ*. By its use the first stage of labour, or the dilatation of the os uteri, could, in a great degree, be advanced, before the labour itself actually began."—*Dr. Cormack's Journal, Aug.* 1844.

Med. Chi. Rev., Oct. 1844, *p.* 577.

118.—ON THE POSITION OF THE PARTURIENT WOMAN.

By W. Smith, M.D., Physician to his Royal Highness the Duke of Cambridge, &c.

[Dr. Smith maintains, that the common position of the parturient woman in this country, viz., on her left side, ought not always to be recommended. This is a question which has frequently been discussed, and perhaps is too much neglected. Although we cannot agree with Dr. Smith in his opinion, that the relative axis of the brim of the pelvis can be materially altered, with respect to the lower part of the vertebral column, seeing that the connexion between this and the pelvis is so intimate, and remembering also that in bending forwards or backwards, the brim only follows the movements of the sacrum and lower lumbar vertebræ, yet we are ready to admit that there are cases in which the mobility of the lower portion of the vertebral column may so alter the direction of the brim, as in some degree to facilitate the parturient process. The direction of the brim of the pelvis varies in different women, in some being more horizontal, and in others inclining more downwards and forwards, so as almost to approach the perpendicular. In such cases, when the woman inclines forwards or backwards, she may in some measure alter this inclination in relation to the spine, and may thus facilitate or retard

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the descent of the fœtus. Thus, if the brim be nearly horizontal, it would evidently not be advantageous for the woman to bend forwards; and if more perpendicular, not to bend backwards, as both these positions would slightly impede the head in its passage through the superior axis of the pelvis.

These considerations ought, therefore, to be remembered by every practitioner. Dr. Smith's views on this question are summed up as follows :—]

1. That no one position can be applicable to all cases.
2. That the axis of the pelvis may be materially altered by the woman's position.
3. That any change in the position of the pelvis, produced by the position of the woman, must be effected by the bending of the spinal column backwards, forwards, or to either side.
4. That there may be lateral curvature of the whole spinal column, or curvature of the superior dorsal vertebræ antero-posteriorly without altering the axis or inclination of the pelvis in reference to the whole trunk and centre of gravity.
5. That we cannot have curvature of the lumbar vertebræ antero-posteriorly without very materially altering the inclination of the pelvis.
6. That the brim of the pelvis may form a much more acute or obtuse angle with the spinal column than the standard, even in the absence of disease.
7. That when either of the latter conditions exist, we can, by bending the spinal column backwards in the one, and forwards in the other, adapt the pelvis to the axis of the uterus.
8. That this power of altering the pelvis upon the spine, so as to apply to midwifery, exists only in the mobility of the three or four superior lumbar, and four or five inferior dorsal vertebræ.
9. That if any single position could be fixed upon for the parturient woman, that midway, between lying on the back and side, is least objectionable.

Ed. Med. and S. J., Oct. 1844, *p.* 460.

119.—*Treatment of Dysmenorrhœa.*—[Dr. Rigby, in his treatise on this subject, considers that it depends, in common with some other uterine affections in derangement of the assimilating processes which may be merely "the local phenomena of a general condition of the system. This general condition he thinks is chiefly dependent on a gouty or rheumatic diathesis. He generally begins the treatment with one active dose of calomel, from five to eight grains, followed by a mild purge of rhubarb or magnesia next morning. Leeches to the anus either immediately before the menstrual period or equidistant between the two periods, are very efficacious; but often require repetition before their full value is seen.]

The attention of the practitioner must now be devoted to the more specific treatment of the case. If the circulation be plethoric and strong, the urine scanty, high-coloured, with considerable excess of lithic acid and lithates, colchicum in the form of the acetous extract, with extract of hop or henbane, may be given at night, or night and morning, and some mild saline with sp. ætheris nitrici occasionally during the day.

The salines, as recommended by Dr. Prout, are well worthy of attention; they not only diminish the disposition to the formation of lithic acid during the processes of primary assimilation, but allay the irritable state of the digestive organs, and the urine becomes increased in quantity and more healthy in its characters.

Where the disease assumes the rheumatic or rheumatic-gouty character, we usually find it associated with less power of general circulation, and with local symptoms of less active character. Guaiacum and iodine are valuable remedies in these affections, either separately or combined. The tinctura guaiaci ammoniata may be taken in milk night and morning; or ten grains of pulv. guaiaci and of magnes. carb. every morning, and from two to five grains of potass. iod. with extract of hop or hentane at night; or if it be deemed unnecessary to use the guaiacum, the potass. iod. may be given two or three times a day in sarsaparilla with liq. potassæ, and the bowels regulated by an alterative or laxative pill at night; or, if it be desirable to promote diaphoresis, by a dose of Dover's powder.

There are few remedies which keep up a healthy action of the liver so well as the taraxacum, especially when preceded by a dose or two of mercurial medicine. In most of the affections under consideration, where it is important to maintain this function in due activity, and yet where the *constant* use of mercurials is highly inexpedient, taraxacum becomes a valuable adjunct. It is prepared under a variety of forms, but I prefer the extract as being the most certain and convenient; half a tea-spoonful at night, dissolved in a little warm milk, forms a by no means disagreeable cocoa-like drink; or it may be taken with milk and lime-water if necessary. Besides its ordinary effect on the liver, and therefore indirectly upon the bowels by supplying them with healthy bile, I have reason to think that it also acts upon the skin like sarsaparilla, and for this purpose may sometimes be advantageously combined with it.

Med. Chir. Rev., July, 1844, *p.* 118.

120.—*Protracted Lactation.*—With the exception of a case by Dr. Kennedy, the following is one of the most remarkable we have met with of Galactirrhœa. It is related by Dr. Green in the September number of the New York Journal.

Mrs. T. V., aged 47 years, and the mother of four children, has had abundance of milk for twenty-seven years past. There has been a period of exactly four years and a half between each birth, and the children were allowed to take the breast till they were

running about at play. She had now been nine years a widow, and is obliged to have her breasts drawn daily, the secretion of milk is so copious. The distance between the periods of pregnancy is worth the consideration of our political economists, and illustrates the doctrine of Dr. Loudon on the subject of protracted lactation.

Med. Chi. Rev. Oct., 1844, *p.* 520.

121.—*Treatment of Leucorrhœa by Iodine.*—M. Van Steenkiste has made use of a dilute tincture of iodine with great success in cases of obstinate chronic leucorrhœa.

℞ Iodine, gram. iv.; Alcohol, gram. lx. solve; et Aquæ destill. grammes cxxv.; about 30 fluid grammes (or ℥xv.) are to be thrown into the vagina as an injection, and repeated every day, or every other day, according to the excitement it occasions.

Med. Gazette, July 19, 1844, *p.* 544.

122.—*Injection of the Uterus as a means of Expediting Delivery.*—A farmer in the neighbourhood of Edinburgh, son of a late eminent surgeon of that city, and well known to the editor of the Medical Gazette, frequently had cows in great distress during their accouchment, and now and then perhaps, like other farmers, he lost a cow in the act of parturition. On one occasion, when a poor animal of considerable value had been suffering for a very long time, and there was every prospect of an unfavourable issue to the affair, as it seemed inevitable that the creature must die undelivered, the owner hurried into Edinburgh, distant about five miles, and took counsel with the eminent veterinary professor, Mr. Dick, as to the course to be pursued.

At the suggestion of that gentleman, he, with all the expedition possible, threw into the uterus from six to eight quarts of tepid water, the animal's hind quarters being previously elevated by a bundle of straw, so as to aid in preventing the return of the water. The instrument employed in the injection was the flexible tube (in fact, that used for the stomach pump), attached to Read's patent syringe, which was easily introduced over the shoulder of the fœtus, the muzzle and fore-feet of which had been ascertained to be presenting at the commencement of the labour. The liquor amnii had completely escaped at a very early stage, and it was fully twenty-six hours afterwards before Professor Dick's excellent and ingenious advice was applied. But after the injection the calf was felt floating freely in the cavity of the womb. The animal, however, was so totally exhausted, that there still seemed no hope of the calf being expelled by the natural efforts. Nevertheless, within five minutes after the injection of the water, a vigorous pain came on, and the patient was speedily and safely delivered of a live calf, and sustained no other ill consequences than a few days' weakness, the natural effect of her previous suffering.

Our friend mentioned this very ingenious plan to a neighbouring surgeon-accoucheur in large practice, who was so much struck with its simplicity and apparent safety, that he resolved to adopt it the first favourable opportunity. An occasion soon presented itself, in a case where nothing but the long forceps could have effected the delivery of the sufferer; and shortly afterwards in a second instance, where turning and delivery by the feet would have been indispensable to save the patient's life.

In both cases the injection of about a quart of tepid water was attended with complete success; the patients were both delivered of living children by the natural efforts, without any unfavourable symptoms ensuing.

We have gathered these particulars from the owner of the cow, the gentleman who, with his own hands, made practical application of Professor Dick's valuable suggestion, believing that the procedure indicated is new, free from danger in itself, and likely in many cases to obviate the necessity for more formidable and painful operations.

Med. Gazette, July 19, 1844, *p.* 527.

123.—*On the Sex of the Child as a Cause of Difficulty and Danger in Parturition.* By James Y. Simpson, M.D., F.R.S.E., &c., &c.—[In an elaborate and learned paper on this subject, Dr. Simpson shows "that the sex of the child has a very marked and demonstrable influence upon the difficulties and dangers of labour." He shows that in general "the adaptation of the head of the fœtus to the maternal canals is so very close and accurate in the process of parturition as it occurs in the female of our own race, that deviations of a very slight degree in the relative size of the cranium of the child, and of the pelvic passages of the mother, should, when viewed on the large scale, lead to differences of a very appreciable and notable extent in the relative safety or danger of the whole process." He brings forward the following propositions, which he proves by reference to statistical tables, embracing a great number of cases:—]

1. Of the mothers that die under parturition and its immediate consequences, a much greater proportion have given birth to male than female children.

2. Among labours presenting morbid complications and difficulties, the child is much oftener male than female.

3. Amongst the children of the mothers that die from labour or its consequences, a larger proportion of those that are still-born are male than female; and, on the contrary, of those that are born alive, a larger proportion are female than male.

4. Of still-born children a larger proportion are male than female.

5. Of the children that die during the actual progress of parturition, the number of males is much greater than the number of females.

6. Of those children that are born alive, more males than females

are seen to suffer from the morbid states and injuries resulting from parturition.

7. More male than female children die in the earliest periods of infancy; and the disproportion between the mortality of the two sexes gradually diminishes from birth onwards till some time subsequently to it.

8. Of the children that die in utero, and before the commencement of labour, as large a proportion are female as male.

[These propositions are supported by a series of interesting tables. The measurement of the heads of sixty males and sixty females are then brought forward, which show—]

1. The head of the male infant, when measured across from ear to ear, over the fontanelle, is about 2 5-7th lines, or nearly two-eighths of an inch greater than that of the female.

2. In circumference, the head of the male is 4 2-5th lines, or almost precisely three-eighths of an inch greater than that of the female. Hence,

3. The *transverse* diameter of the male head is nearly one-eighth of an inch greater than the transverse diameter of the head of the female child.

[Dr. S. further considers that "for the very marked differences existing between the difficulties and perils of male as compared with female births, there is no other traceable cause in the mechanism of parturition except the larger size of the head of the male child;" and that "an increase in the effects may be shown to be connected with an increase in the alleged cause." He shows also that "in laborious labours, with the head presenting, in proportion as the order of labour rises in difficulty the amount of male births in them rises in number; and that "the greater size of the male than of the female infant's head is sufficient in itself to explain the greater dangers attendant upon male than female births, when we consider it in relation to its absolute and cumulative effects."]

Edinburgh Med. and Surgical Journal, Oct., 1844, *p.* 387-439.

124.—*On Ergot of Rye.*—Mr. Rowle of Saffron Walden, remarks that few drugs suffer more than ergot of rye from a small parasite; and that if the insect be prevented from forming, or be destroyed early, the efficacy of the preparation is much more certain. He now invariably keeps a small piece of camphor in the stoppered bottle which contains the ergot. This soon annihilates the whole race of insects, and adds considerably to the certainty of the effect of the medicine.

Lancet, August 10, 1844, *p.* 611.

[A correspondent in the Lancet reminds us that this same remedy was recommended by Dr. Bright, in No. 141 of the Edinburgh

Medical and Surgical Journal. Dr. Bright says—"Camphor, if intermixed with even-powdered ergot, completely prevents the formation of animalculæ, &c.]

Lancet, August 24, 1844, *p.* 673.

[Mr. Simpson, of Staines, recommends that the camphor should be *mixed* with the ergot in the proportion of a grain to every scruple. This hint was given him by Mr. Spingin, of Saffron Walden. We should recommend, however, some caution in mixing a grain with every scruple, as from some cause or other the secale is not nearly so powerful as it used to be; and much larger quantities require to be given than were formerly. A scruple or half a drachm was a proper dose some years ago, but we have frequently to give three or four times that dose at present before any effects are produced.]

Lancet, Sept. 7, 1844, *p.* 730.

125.—*Case of Vaginal Hysterotomy.* By Dr. Bedford.—Dr. Bedford was called in consultation with several other practitioners to a lady who had been in violent labour for 24 hours, which had not however, caused the slightest progress in the delivery. Her sufferings were of the most intense nature, so much so, that her cries had attracted a crowd of persons around the door. She had previously had two children, and her labours were described to have been easy. On examination, a solid resisting tumour, evidently the child's head, was felt at the upper strait of the pelvis, through the walls of the strongly contracting uterus, but no *os uteri* could be detected. In carrying the finger upwards and backwards towards the *cul de sac* of the vagina, two fleshy bridles were discovered, extending from that portion of the vagina to a point of the uterus, where some roughness was perceived, but no aperture. Between the bridles and this rough point distinct cicatrices were felt, of which this rough surface was one. On closely questioning her as to whether she had ever sustained any injury, she confessed that, on five previous occasions when she felt herself pregnant, she had applied to a quack, who gave her powders, which produced miscarriage, but that on this occasion the powders had failed. She again applied to the quack, who proposed to "probe" her; but as a sum was demanded for this operation above what she could afford to pay, she attempted to probe herself. She used a whalebone probe several times, which produced considerable pain, followed by a discharge of blood. It was thus apparent that the present state of matters had been produced by violence inflicted on the mouth and neck of the uterus. It was therefore resolved to incise the womb in the most depending part. A probe-pointed bistoury, covered with linen to within four lines of its point, was therefore carried into the vagina along the finger, introduced into the uterus, where the roughness was detected, and carried first to the right and then to the left. As it was however feared that this aperture would not be sufficient, an incision was also carried through the posterior lip. The uterus contracting violently, rapidly dilated

the aperture thus made, and in ten minutes a living child was born. The patient recovered rapidly, without one untoward symptom.

Ed. Med. and S. J., July, 1844, *p.* 258.

126.—*Treatment of Uterine Hæmorrhage.*—[In a report of the obstetric practice of University College Hospital, by Dr. Murphy, this gentleman recommends, 1st, the restoration of nervous influence which had been destroyed by loss of blood: 2nd, to secure a permanent contraction of the uterus.]

To accomplish the first, every effort was made to support the general circulation, and at the same time to subdue nervous disturbance; stimulants were, therefore, freely employed, the temperature of the extremities maintained, free ventilation of the apartment secured, the patient kept in the horizontal position, and tincture of opium given in moderate doses (xx. to xxx. M), until sleep was procured. To secure the second object, powerful and steady pressure was made over the uterus, by grasping the fundus firmly with both hands, until it began to contract. Its contraction was then maintained by several graduated pads so applied as to prevent the uterus escaping from them if it should again relax. These were secured by a *broad* bandage, very tightly embracing the pelvis and the whole of the abdomen, caution of course being used not to impede the action of the diaphragm. As an additional aid, secale cornutum was sometimes given, but never employed as a substitute for the above plan.

The advantage of opium, cautiously given, where there was much exhaustion, was very remarkable. The evidence of nervous influence being restored, was the almost instantaneous obedience of the uterus to the means employed to promote its contraction, so that in some cases where ergot of rye completely failed, opium succeeded. Cold water as a refrigerant was used with caution, applied only about the pelvis, or as a shock to cause contraction of the uterus.

Dublin Journal of M. S., Novr., 1844, *p.* 192.

127.—*Puerperal Fever.*—[A singular circumstance connected with puerperal fever is related by Dr. Murphy, in his "Report of the Obstetric Practice of University College Hospital." In a very difficult case he had occasion to introduce his hand to extract the placenta. The discharge from the uterus acted as a *morbid poison.*]

In this case, says he, it being necessary to withdraw the placenta, each arm was successively passed into the uterus, and both were grasped tightly by its cervix. Pustules appeared on the arms two days after this, which at first seemed to be the same as the writer before observed to be produced by the acrid discharges of the uterus. One of them, however, soon presented new characters. A deeply livid base surrounded the pustule, and that part of the arm near it was becoming hard and swollen. The promptitude with which a

judicious treatment was carried into effect, prevented much constitutional disturbance taking place. This pustule had all the appearance of the "pustule maligne" or "charbon," which is well known to occur in the South of France. It prevails *epidemically* among horned cattle, and is derived from their blood by the butchers, with whom the pustule is often observed.

The argument from analogy in the present case seems to be, that a morbid poison was generated in the blood of the patient (epidemically ?), contact with which was sufficient to communicate the taint, and to convert an ordinary furunculus into a malignant pustule; and that by parity of reasoning, the same altered condition of the blood caused all the phenomena of puerperal fever in the patient. This view receives a stronger support from the fact that the patient was free from the ordinary symptoms of uterine inflammation, which were anxiously looked for as the danger that was expected to arise.

Ibid., Novr., 1844, *p.* 194.

128.—*Galvanism in Uterine Hæmorrhage.* By Dr. Radford, Manchester. Uterine hæmorrhage sometimes proceeds to such an extent as to render the delivery of the child, in my opinion, a dangerous practice, although sanctioned by some of our best obstetric writers, and adopted by the great bulk of the profession, being considered by them as giving the woman the best, if not the only chance of surviving, and of saving the child's life in such cases of extreme exhaustion from flooding. I have, therefore, in this short communication, suggested the application of a most important remedial agent, capable, as far as I am able at the present time to state, of rousing the subdued energies of the uterus, and thus bringing into operation that power which can alone secure the woman from further loss, I mean the contraction of this organ. This consequently would enable the practitioner successfully to adopt such measures as would have the effect of raising the vital powers, and at the same time would also prevent any further effusion (which nearly always occurs) in cases where the action and power of the heart and arteries are increased by the administration of stimulants, or other means of support, while the uterus still remains in an atonic state.

The remedy I allude to is galvanism. Slight shocks carried through the long axis of the uterus, by means of a conductor being introduced along the vagina to the os uteri, and another being placed externally over the fundus. Shocks should also be carried transversely through the organ, by placing a conductor on each side.

Prov. Med. Journal, Sept. 18, 1844, *p.* 386.

129.—*Mammary Abscess in the Fifth Month of Pregnancy.*—[In a case of this kind, related by Mr. Phillips, occurring at the Westminster Hospital, the woman found a small hard swelling about the size of a walnut, which rapidly increased until the breast became more than double its natural size. It broke in several places, and a thick

yellowish matter was discharged. The breast had all the appearance of a large scrofulous abscess, with numerous ulcerations on its surface, from which a great quantity of pus escaped. She was between five and six months advanced in pregnancy. Mr. Phillips made an incision into the most depending part, by which a great quantity of pus was evacuated, to the great relief of the patient. This case is rather singular, inasmuch as it seemed to bear a strong resemblance to breast abscess after delivery. But what we wish to recommend particularly in these cases, is the mode of applying pressure, which Mr. Phillips adopts in the after treatment, and which will be found of great service. When the pus has been evacuated, he directs that pressure should be applied to the breast, by means of soap-strapping and a bandage. The soap-strapping should be carried a good way around the chest, so as to get a firm hold; and a bandage may then be applied round the chest, so as to produce any degree of pressure that may be required, leaving uncovered any sinus that may be present. This seems to be the best way to prevent the extension of the disease through the lax tissue of the part.]

Medical Gazette, May 31, 1844, *p.* 317.

130.—*Case of Twins, in which both Placentæ were expelled previous to the Delivery of the last Fœtus, without consequent Hæmorrhage.* By Samuel Tyler, M.D. My father was requested to attend a female in labour, in the morning of the 6th July, 1843, 10 o'clock A.M. She had been delivered by her mistress two hours before (8 o'clock A.M.) of a fine child. In a reasonable time after the expulsion of the fœtus, the placenta was discharged. The mistress observed that the placenta presented an unusual appearance, and that the cord seemed larger than natural, but it was not until she had divided the funis that she discovered there was another fœtus "in utero," and that she had mistaken a double placenta and a double cord for an enlarged condition of those two important organs.

When my father arrived, he made an examination per vaginam, and discovered that the remaining fœtus presented the left shoulder. It was then more than an hour since the cord had been severed, and of course the life of the fœtus destroyed. In addition to the unfavourable circumstance of a shoulder presentation, there was firm hour-glass contraction of the uterine fibres around the body of the child. Having, in conjunction with the means usually calculated to relieve so firm a contraction of muscular fibre, made many unsuccessful efforts to turn the fœtus in order to convert it into a footling or breech case, he sent for me. On my arrival, I soon discovered (indeed it was for that purpose he sent for me) that embryotomy offered the only chance of relief to the female. After making several equally ineffectual efforts at turning, I proceeded to perform the operation, which consisted in removing with the scalpel the left arm at the shoulder-joint, and then opening the thorax by a puncture or incision between two of the ribs, and thus partially evacuating its contents. The delivery was effected, after compressing the thorax

and abdomen, by carrying up the right hand to the breech, passing the finger into the rectum, bringing down the breech, and then finishing the delivery "*secundum artem.*"

The patient was placed in a comfortable position, and every precaution taken to prevent, or rather to relieve, what seemed inevitable, viz., copious hæmorrhage, but none occurred; on the contrary she went on favourably, soon entirely recovered, and is now nursing her infant.

Here, therefore, is a case not merely of simple placenta prævia, but a double surface exposed, there having been two placentæ; the fibres of the womb, first in a state of rigid contraction, then the irritation consequent upon the performance of embryotomy, and lastly a state of excessive relaxation, and still no hæmorrhage.—*American Journal of the Medical Sciences.*

Med. Gazette, May 31, 1844, *p.* 319.

131.—*On the Speculum Uteri.*—Mr. Protheroe Smith, Assistant Lecturer on Midwifery at St. Bartholomew's Hospital, has suggested some alterations in the speculum, which in many cases may be useful. The speculum described by him in a paper read before the Medical and Chirurgical Society, consists of a glass cylinder fitted to an outer one of metal, within which it slides. The metallic tube has its inner surface highly polished, the reflecting powers of which are still further increased by the glass cylinder which it contains. The edge of the smaller or uterine extremity is rounded into a smooth ring, which projects lightly from the inner surface, facilitating its introduction per vaginam, and also presenting a limit to the farther progress of the internal tube. In its side is cut an oval aperture, of about three inches in length, and two in breadth, and extending to within an inch of the uterine end of the cylinder. The other extremity terminates in a rim, having its surface blackened for the purpose of absorbing any rays of light which might otherwise be reflected so as to dazzle the eye of the observer. There is also a corresponding rim to the glass tube, by which it is more easily withdrawn from the metallic cylinder.

Mr. S. has found this instrument of great use in examining the condition of the vagina. With this view the speculum should be passed per vaginam to its full extent, when, by partially withdrawing the glass tube, a portion of the lining membrane would be seen protruding through the oval aperture into the cavity of the cylinder, and by turning it gently round, every part of the canal would be successively brought into view. Thus it had been found to be of much assistance in cases of vesico-vaginal fistula, when the opening was so minute as to perplex the operator, if not to elude his search.

For the application of leeches to the cervix uteri, or the surface of the vagina, the instrument is also well adapted. To accomplish this, two fine wire-gauze tubes are supplied; one for the os uteri, the other for the vagina. In the former, one end only is open, through which the leeches, previously placed within it, are brought into

immediate contact with the os uteri by means of a wire-gauze piston. In the latter each end is closed, and there is an oval aperture similar to that in the metallic tube. The aperture in the outward tube being directed to the part of the vagina about to be leeched, the wire-gauze cylinder containing the leeches is introduced, and turned round until the two openings correspond.

Med. Gazette, July 5, 1844, *p.* 471.

[A correspondent of the Lancet states that Mr. Smith has been anticipated in this kind of speculum, which has been for some time in use in University College Hospital, and made by Coxeter, of Grafton Street.]

Lancet, July 20, 1844, *p.* 543.

132.—THE INVERTED UTERUS REMOVED BY LIGATURE.

By J. Green Crosse, M.D., Senior Surgeon to the Norwich Hospital, &c.

Dr. Crosse publishes the following remarkable case. On the morning of October 10, 1841, I was called by the medical gentleman in attendance to Mrs. W., aged 29 years, who, after a very tedious first labour, during which ergot had been thrice given, applied the forceps, but did not succeed in effecting delivery. I found the forceps incorrectly applied, and having placed them aright, delivered the patient with very little effort on my own part, a few strong pains completing the expulsion of a still-born child. In half an hour there was uterine contraction; and the placenta descended so as to be felt in the vagina, and with the hand I brought it past the os externum; but, although nine-tenths of the placenta were thus made visible, a portion still remained adherent to a mass occupying the vagina, as if there was another placenta. I succeeded in detaching the placenta on a level with the external labia, and grasping the mass in the vagina, I carried it up into the uterus. All these occurrences occupied very little time; the patient was losing blood, had become pallid and faint, and promptitude of action was required. On reflection, it became evident to me, that the placenta having been attached, and perhaps morbidly so, to the fundus uteri, this part had become inverted, and descended through the os uteri into the vagina; and that, in the relaxed state of the organ, I *reverted* the fundus, and placed all *in situ*. On leaving the patient I entertained the most unfavourable prognosis, but learnt from her usual attendant, who remained with her, that she rallied in two or three hours, and in the evening there was satisfactory improvement, the pulse going well—no loss—no fainting. The abdomen became large and tympanitic; but she recovered, and subsequently furnished the following and still more singular history:—

Arrived at the full term of gestation, and in her 31st year, this Mrs. W. terminated her second labour naturally, after eight or ten hours of pain, by the birth of a living female child, at nine o'clock,

p.m., of January 14, 1843. The surgeon in attendance informed me, that profuse hæmorrhage followed—two sudden and enormous gushes—and the placenta not descending, he introduced his hand into the uterus, and finding part of the placenta detached, and part still adherent, he proceeded to separate the adherent part with his fingers, but experienced much difficulty, and could only succeed by removing the placenta piecemeal. The hæmorrhage had ceased when I arrived at ten o'clock, p.m.; but the patient continued faint, pallid, cold, with a pulse scarcely to be felt, and did not rally until the expiration of five hours.

No urine having been passed for above thirty-six hours, I was required to use the catheter, when I felt in the vagina a round body as large as my fist, which I recognised to be the uterus completely inverted. Having requested the attendance of the surgeon who had officiated at the delivery, I drew off three pints of urine, and proceeded to replace the uterus, trying the various manipulations advised on such occasions. All the efforts both of my associate and myself proved unavailing; the uterine tumour was firm and contracted, and as no advancement towards reduction was effected after an hour's trial, we deemed it prudent to desist; the patient's condition indeed warned us to take this course, her pulse being 120, and feeble, the abdomen distended, and the symptoms indicating immediate danger. Anodynes were administered freely, and by care and quietude the patient's condition gradually improved. The catheter was required every twelve hours.

At the expiration of four days, the patient incautiously raised herself to facilitate an evacuation from the rectum, and by straining caused the inverted uterus to prolapse through the external labia. It was evident now that complete inversion of the organ had taken place; the lowest part of the tumour answering to the internal fundus, had a ragged and sloughy appearance, indicating the spot to which the placenta had adhered; the mass protruded five inches and a half at the external labia, and measured twelve inches in its largest circumference. The patient continued in a very alarming state, with a pulse at 120, or even more. I feared to disturb her much, using a male catheter of gum elastic to draw off the urine, and administering anodynes; and having made up my mind not to return the tumour into the vagina, I covered it with soft linen, or lint, and encircled it with a bandage. This measure was repeated daily, and the graduated and uniform pressure of the bandage checked the mucous discharge, gave great comfort and relief to the patient, enabled her to turn in different postures, and aided the diminution of the size of the inverted organ, which naturally would diminish, but now did so with such rapidity, that, at the expiration of eight days from the commencement of this treatment, the measurement from the fundus to the neck of the inverted organ was six inches and a half, and the greatest circumference nine inches and a half.

At this period the surface of the tumour was still of a florid red colour, so tender and vascular as to bleed on the slightest touch, and

at the lowest part, or fundus, where there was an appearance of dark slough, being the part to which the placenta undoubtedly had adhered, the slough being now separated, there was an irregular depression, about the size of a shilling, decidedly ulcerated. Embracing the opportunity when the bandage was removed, I experimented by touching the exposed internal (now the external) surface of the uterus, by pressing it with the finger, pinching it, pressing my finger nail into it; but none of these means, nor even pricking the membrane with the point of a pin, caused any inconvenience, or produced any sensation or impression upon the patient. It being wintry weather, I got some snow, and placed it on the exposed lining membrane of the uterus, but no sensation of pain or of cold was experienced by the patient; at the part, however, answering to the os uteri, and at the contiguous part of the vaginal membrane, the cold was felt by the patient from the contact of snow. An abundant mucous discharge was furnished by the whole surface of the exposed tumour.

The termination of the vaginal membrane in the uterine membrane answering to the os, is very distinguishable in appearance, and is further marked by a ring or thickening, which corresponds to the cervix. This ring or thickening can just be brought into view by pulling down the whole mass, and in this state of the parts I introduced the finger, as far as is admissible, into the vagina; I can at each lateral aspect feel each round ligament, tense and stretched as a firm cord; pain is experienced in the groins when the tumour is thus pulled down.

In sixteen days after delivery the length of the inverted organ was three and a half inches only, the greatest circumference eight inches and a half, under continuance of the bandaging. The catheter was still required twice daily, but soon after this date the urine was often passed naturally, and the catheter was very rarely required.

Having, after the first trial, given up all idea of reducing the inversion, and contemplating the final removal of the organ, I was induced not to carry it up into the vagina, considering that cleanliness could be better promoted by the tumour remaining external, its diminution of size be expedited by bandaging, and facilities offered for removal of the organ by ligature, when it should be determined upon; whilst at any time I could place the uterus in the vagina, if deemed advisable.

The patient's condition was much improved at the three weeks' end, but after this it deteriorated; the profuse mucous discharge weakened her greatly; she became anxious, desponding, restless; and at the expiration of just one month from delivery, I determined to apply a ligature for the removal of the entire organ. I obtained no instruction from books as to the most eligible spot for placing the ligature; but from the experiments I had made in regard to the sensibility of the vaginal membrane, compared with the uterine, I thought it better to avoid the former, and place the ligature on the neck of the uterus, where the circumference measured above five

inches; and this choice has the sanction of our valuable colleague, Mr. Newnham, whom I consulted by letter.

On the 12th of February, therefore, the ligature, silken, and about the twelfth of an inch in thickness, was applied; and by means of an instrument I had the power of tightening or loosening the ligature at pleasure. Before tightening the ligature, I bandaged the tumour firmly with a common roller; every two or three hours during the first day, I tightened the ligature a few notches; the mass below the ligature enlarged under the constriction, bulging out where unsupported by the roller, and assuming a dull red colour. It was obvious that the ligature was tight enough only to interrupt the return of venous blood, and but slightly if at all, to interfere with the supply of arterial. It was even probable that, with so large a mass included, the ligature would scarcely act upon the central parts. To tighten the ligature at short intervals, in proportion as it became stretched and the parts included gave way, became necessary, in order to maintain the degree of constriction. The patient experienced no pain in the seat of the constriction, and suffered no sickness, but had pain at the lower part of the abdomen, and in the loins, which moderate doses of opiates relieved.

On the second day, the constriction being kept up, and even a little increased, the tumour, where visible, was dark as a mulbery. Contact of the soft parts with the instrument was prevented by lint, and renewal of dry linen was often required to absorb the abundant mucous discharge. Sleep has been gained by the use of opiates; the abdomen is tumid, but not tender on pressure.

Every day I tightened the ligature a few notches, and had never occasion to loosen it, on account of any very urgent or painful symptoms, which I attribute to my keeping in view a gradual constriction, so that the ligature might work its way through the included mass, by *ulcerated absorption*, and not cut through as a knife, nor suddenly produce strangulation of the part, which could not be borne. The pulse continued at 120, as it was before I began the operation, and the catheter was used several times each day.

On the 16th, four days from the commencement, the superficial parts of the tumour appeared quite gangrened, still the ligature required to be tightened thrice in the day, a few notches each time; and next day the tumour became a flaccid, dark, and evidently putrifying mass, leaving no doubt as to the arterial circulation being entirely interrupted in it; so on the 18th I cut it off, three quarters of an inch below the ligature, to the great comfort of the patient. The pulse subsided to 108, and so I altered from low diet to meat, and a little wine or porter, to support the patient's strength. In the evening, after this excision, I found the ligature, which was still kept tight, and which was at first apparent at the external labia, drawn up an inch and a half within the vagina. The weight of the tumour being removed, and the resistance from its size at the external labia no longer present, this retraction of the remaining os into the vagina, is attributable to the action of the round ligaments.

At the expiration of twelve days, February 24th, I removed the ligature, leaving the small remaining slough to separate spontaneously; the woman's health is improved, the urine has for some days been voided naturally, the pulse is 100 in a minute.

March 6th. All mucous discharge has ceased. By the use of the speculum I ascertained the vagina to be healthy, and can observe the part corresponding to the os uteri, a transverse slit, flat at its edges, without any remaining ulcer.

On the 11th of March the patient sat up, and after the 14th came down stairs daily, occupying herself moderately in her domestic affairs. By the 20th she was restored to as good health as usual. A sponge pessary was worn for some weeks.

It is now sixteen months since the operation; no menstrual loss has appeared, but she has performed conjugal duties without inconvenience, and enjoyed as good health as was usual before being deprived of the uterine organ, a part of the female system whose essential functions have reference naturally to only a portion of the possessor's life, and the absence of which, when once safely accomplished, can be borne without any detriment to health, or abbreviation of the duration of her existence.

Prov. Med. Journal, June 12, 1844, *p.* 155.

[Another case of removal of the uterus is published by Dr. Toogood, of Bridgewater. It is as follows:—]

About sixteen years ago I was requested to visit Miss L., aged about forty, who was represented to be suffering from a considerable swelling, which prevented her from passing any water. The introduction of the catheter was rendered somewhat difficult from the protrusion of a large mass from the vagina, but after a little time I succeeded in drawing off between two and three pints of water, and then proceeded to make a more accurate examination. I found that the uterus was completely prolapsed, and hanging down between the thighs. There was not much difficulty in returning it, or retaining it in its natural situation by a large globular India rubber pessary, which I directed to be removed occasionally and replaced. I heard nothing more of my patient for three years, when I was again desired to see her on account of a profuse and most offensive discharge, which had existed for some time. To my very great surprise I discovered that the pessary had never been removed, which at once explained the cause, and I was actually obliged to deliver her of it with the forceps. From that time, as I subsequently learnt, it was never replaced, consequently, the uterus was frequently coming down, and prolapsing beyond the external parts, and she had acquired the habit of returning it by sitting over an open space, and pushing it back with her fingers. This course was pursued until the 13th of April last, when it came down, and, after making repeated ineffectual attempts to return it for three days, she sent for my late partner, Mr. Parsons, who gives me the following statement.

"On Wednesday, April 17th, I was sent for to see Miss L., a maiden lady, nearly sixty year old, who I had before known to have been suffering from a prolapsus of the womb; on my arrival I was informed that this had come down on the Saturday previously, during a violent fit of coughing, and that all her attempts to reduce it, had failed. On examination I discovered a very large protrusion of a pyriform shape, and extending from the vagina to at least seven or eight inches. The surface was not very sensitive, but was of a red, florid colour, and in some parts ulcerated and ecchymosed from repeated attempts to effect its reduction, and from which some hæmorrhage occasionally occurred. Every endeavour on my part to return it being fruitless, I ordered some leeches and cold applications to be used, hoping, in a day or two, by these means, to reduce its bulk, so as to enable me to return it. None of these remedies, however, succeeded, and as, on a more careful examination, I discovered that the neck of this large mass, as it entered the vagina, rather diminished in size, I requested a consultation with my friend Dr. Toogood, who had formerly attended the patient, who agreed with me on the practicability and safety of removing the whole by ligature. Accordingly, on Sunday the 21st, we applied a ligature very firmly round the neck of the swelling, just within the vagina, and took away the protruded part immediately.

"The mass removed was about two pounds weight, the shape of the uterus, but its structure much altered in character, the cavity being quite obliterated, and the os uteri become almost cartilaginous. No bad symptoms ensued, and she told me yesterday, the 22nd, that she was as well as when she was sixteen.

"On examination, no uterus can be discovered, but the vagina seems to terminate in a short cul de sac."

At the time I met Mr. Parsons in consultation, the patient was in a very suffering state from general irritation and repeated discharges of blood, and as the parts had begun to assume a somewhat flaccid and livid appearance, I thought the safest course would be to remove the whole as speedily as possible, and I advised the operation with the greater confidence, from having, in the course of my experience, known two other cases in which the whole body of the uterus was removed by ligature, without any immediate danger; but as these cases were not my own, I know nothing of the details or ultimate event of either.

Prov. Med. Journal, July 10, 1844, *p.* 214

Complete Extirpation of the Uterus by Ligature. By Dr. John M. Esselman, of Nashville.

A lady, 32 years of age, married 14 years, had been in bad health ever since the birth of her first and only child, twelve years previously to Dr. E. being consulted. She had been attended in her confinement by an old woman; her labour was a protracted and painful one; she had flooded profusely, and was very ill for several weeks after her confinement. After she was able to leave her bed

and walk about the house, she was much annoyed by "*bearing-down pains,*" as she called them, in the region of the womb, extending up in the direction of the lateral ligaments of that organ. She had also suffered much from pain and weakness of the back, and also from pain and a numb sensation down the inner portion of the thighs, and had been a prey to fluor albus ever since she had left her bed of confinement. The menstrual discharge was often very profuse, indeed alarmingly so; she would be confined to her bed for weeks, take medicine to check the hæmorrhage, &c.; then she would be put on the use of tonics, to strengthen her system, as well as to correct the fluor albus. At length she was advised by her physicians that she was labouring under prolapsus of the womb, and underwent the routine of treatment in such cases; but all to no effect, except the relief she invariably obtained from the horizontal position.

Disheartened by the little relief she received, she went to Nashville, where she consulted a distinguished practitioner, who diagnosticated a polypus, and he applied a ligature, which was productive of such alarming symptoms that he removed it. Various other medical men were consulted, but without relief being afforded.

When Dr. E. was consulted, he found her in a deplorable situation; she was labouring under hectic fever, had profuse night sweats, hacking cough, and all the symptoms indicative of a rapid decline. On examination, he found a tumour occupying the vagina, about the size of a large pear, and answering in every respect the description usually given of a polypus. The vagina itself was very irritable and much ulcerated, so that it was impossible to make a very minute or satisfactory examination. However, from the history of the case, and the opinions of other medical men who had examined it previously to himself, in some of whom he had the utmost confidence, he concurred with them that it was a polypus. But being at that time a young practitioner, having been but two years in the profession, he requested that some other physician should be called in to assist him in the operation. An intelligent practitioner was according called in, who took the same view of the case; and after a few days of preparatory treatment, a ligature of saddler's silk, well twisted and waxed, was applied; a full dose of camphor, laudanum, and hartshorn having been administered two hours previously. The tightening of the ligature gave great pain, and the dose of camphor, laudanum, and hartshorn was repeated. For the first four or five hours she was very much prostrated, and her pulse sunk to a mere thread; she, however, then became composed, reaction took place, and she rested tolerably well the first night. The ligature was tightened every morning for eighteen days, at which time it came away, and, to the suprise of her physician, instead of a polypus, the tumour proved to be the uterus itself, much reduced in size by ulceration and strangulation. The vagina was much ulcerated, and emitted a very offensive sanious discharge, for which frequent injections of a solution of chloride of lime were ordered, and a solution of nitrate of silver was applied to the ulcers. The general system

was sustained by tonics, such as the muriated tincture of iron, phosphate of iron, quinine, &c., and a generous diet, when the absence of febrile excitement would admit of it. She was a long while recovering, and did not leave her bed for months after the operation, but finally was restored to perfect health. For the first twelve months after her recovery she required frequent bleeding and purgatives to relieve headache and a tendency to vertigo, as well as a general plethora of the system, occassioned, Dr. E. thinks, by the "premature suspension of the catamenial secretion."—*Western Med. and Surg. Journ. Aug.* 1843; *quoted in American Journal of Medical Science, Jan.* 1844.

Medical Gazette, July 12, 1844, *p.* 510.

133.—*Spontaneous Evolution in an Arm Presentation.* By John Edwards, Esq., Dorchester.—On Sunday morning, May 5th, I was called, at seven o'clock, to a woman who had been all night in labour. A midwife was in attendance, and a short time before I reached her, during a fit of coughing, the right arm entered the vagina, and was protruded externally through the vulva. The contractions of the uterus were most vigorous, so much so that I felt it would be imprudent to make any attempt to deliver by turning; under these circumstances I at once gave her one hundred drops of laudanum, with the view of lessening or annulling the pains, and left her for a very short time. I was, however, almost immediately summoned to her again; the pains were as strong as ever; little or no change had taken place, except that the right side appeared disposed to enter the pelvis, and on my pressing this part gently upwards with my fingers a very sudden change took place. The head and arm, which were before closely jammed in the pelvis, ascended, the breech and legs at once entered the pelvis, and by one or two powerful uterine contractions the fœtus was suddenly expelled. The child was dead, but full grown. The right side of the face and neck and right arm were very livid and much swollen, although undue pressure on these parts could not have continued more than two hours; thus showing how strong the efforts of nature had been to relieve herself, and the case well illustrates her operations in difficulties of this kind; but I trust a knowledge of her occasional workings in this way will not be the means of inducing young practitioners to wait, expecting that similar results will ordinarily follow. I was indebted to Mr. Emson for his opinion and assistance in the case.

Lancet, May 25, 1844, *p.* 282.

134.—*On the Physiology of the Human Ovary.* By Charles Ritchie, M.D., Glasgow.—[This gentleman has written a very interesting paper on this subject, of which the following is a short summary by Dr. Cormack.]

In concluding this summary, we can do no more than allude to a few of those lines of investigation which Dr. Ritchie's observations

appear to open up, and to the modifications of our views of the theory of menstruation, and of the physiology of the ovary, in general, to which they point. The evolution, for example, of ovarian cells throughout every period and condition of female life, cutting, as it does, at the roots of M. Gendrin's and Dr. Lee's speculation, that menstruation is produced by the periodical discharge of a Graafian follicle, and refuting also that other more ancient and established notion, already refuted, but under a different aspect, by Bischoff, that the fecundation of an ovum is essential to the rupture of the vesicle in which it is enclosed; the distinct proof afforded, again, that not only are vesicles discharged irrespective of menstruation, but that this function may be continued for a long succession of periods without the rupture of a single Graafian vesicle; the structureless character, farther, of these follicles in infancy, old age, and in protracted amenorrhœa from disease, their increased organisation frequently in other amenorrhœic, but more vigorous states, as during pregnancy, lactation, and after puberty, and their perfected development in menstrual life, shedding light, as such facts seem to do, on the mode of growth in the Graafian follicles themselves, and indicating also that the catamenial flow is not an effect, but in some accessory degree a cause of their maturation, and also of that of their contained ova; the correspondence, again, in the amount of organization of the ovarian calyces, hitherto on an erroneous hypothesis, termed true and false corpora lutea, with the activity of the uterine circulation, from whatever cause, and not, as we have been in the habit of thinking, with the presence or absence of impregnation *per se*, or viewed independently of the local plethora to which it gives rise; the arrangement, farther, of these bodies according to their physical characters, and without reference to any theory of their formation; the settlement of the questions, whether they are conversions simply of the tunics of the discharged Graafian follicles, or are new formations; and, in the cases in which the latter cannot be disputed, whether the effused matter is deposited external to the ovarian vesicle, or within its walls; and, again, the apparently perfect refutation, both from the presumed truth of the general statements, and from individual examples, of the well-known assertion of Haller, "numerus corporum luteorum est in ratione fœtum;" and, finally, the determination with a measure of exactness which has been long felt wanting in this inquiry, of what are the phenomena in the uterus and in the ovaries which do really indicate the fact and period of conception, are so many of the subjects embraced in this investigation, which will obtain for it the consideration of physiologists.

Lond. and Ed. M. J. of M. S., Oct. 1844, *p.* 857.

RETROSPECT.

There is no subject in medicine which has given rise to more difference of opinion than the doctrine of fever : it would be waste of time, therefore, in this place, to allude to the variety of opinions on this point. One of the most recent views is that entertained by Dr. Willis, and which will be found at the commencement of the present volume. Many facts in physiology would seem to corroborate his opinions, but still they can only at present be theoretical, and must require further confirmation before we can place confidence in them. This subject is the more interesting at present, in consequence of the recent attempts which have been made to ascend the Niger, in order to carry civilization and commerce into the interior of Africa. No medical man can read the interesting volume of Dr. M'William on "The Medical History of the Expedition to the Niger, and an account of the Fever which led to its abrupt termination," without being satisfied that if we were thoroughly conversant with the pathology and treatment of this disease, a very important step might be taken in the civilization of a whole continent, and in extending the value of religion and commerce amongst the darkest nations of the world. The great obstacle to the accomplishment of these benevolent views, is not the want of wealth or any thing which capital can effect, but it is simply the ignorance of the nature and treatment of fever. We feel proud of our profession when we see its members the messengers of benevolence and intelligence in the benighted regions of Africa, and when in the distant region of China we read of our nation astonishing the inhabitants of that country by the skill and benevolence of its medical officers, even more than by its military and naval operations.

There is no doubt that the healthy function of the skin is of the most vital consequence to the well being of the animal economy; and hence we find that any morbid or suppressed action of its apparatus is attended with serious consequence. It is very common to say that such an individual has *taken cold*, but the reason of this has never been very satisfactorily explained, although at first sight this may seem a very easy thing to do.

Dr. Willis has advanced an ingenious explanation founded on the experiments of Fourcault, Becquerel and Breschet. These experi-

menters found that when an animal was covered with an impervious glaze, instead of becoming warmer it began to lose its temperature immediately. Dr. Willis thinks that when the secreting function of the skin is suppressed or greatly disordered by a *chill*, it may produce the same effects as when the surface is covered by an impervious varnish. In this process there may be included more or less of inflammatory action. In common with many others, he denies that the specific poisons called miasm or malaria, are the cause of those deadly fevers which are so common in tropical regions. In short he asserts that these poisons are nothing more than "*moist warm air*—air, excessively moist, considered in connection with its own temperature, and the temperature of the human body." It is well known that an individual will bear a very high temperature better when the surrounding air is dry, than when it is moist. In the former case the capillary arteries exude, and the veins imbibe with increased activity; but if the excitement continue too long, the temperature of the body increases too rapidly and death would result. But this is not the true explanation when the surrounding air is moist. In this case the animal dies from the same cause as when the body is covered with an *impervious glaze*—from the want of oxygen being properly conveyed into the system. "Now it is highly interesting to observe that the air of unhealthy intertropical climates differs little from that of a vapour bath at between 80° and 90° Fahr. The dew point of the atmosphere in these countries appears, in general, to be not more than four or five degrees, and frequently not more than a single degree, below the temperature of the ambient air. Were the temperature between 90° and 100° Fahr. and the dew point in the same proportion high, man could not by his nature continue to exist for more than a few hours. In a country having a high mean temperature, say of about 80° Fahr. and an atmosphere that is close upon the point of saturation with humidity, which is precisely what it obtains on the western coast of Africa, man is evidently on the verge of circumstances that are even incompatible with his existence. He has but to be exposed to fatigue and the burning rays of the sun to be actually brought into such circumstances. The surrounding atmosphere cannot take up the watery vapour which is then presented to it in large quantity by the sudoriparous glands, with sufficient rapidity to meet the wants of the system, in its state of excitement, and requiring the freest access of the most thoroughly oxygenated plasma, to keep up movement and life in its several constituent atoms. Great general derangement—*Fever*—ensues, and life is almost of necessity the forfeit."

Whether or not this be a true explanation of the cause of many fevers, we know that to restore a healthy action of the skin is of the first consequence, and when we find its functions restored we seldom feel serious alarm. Dr. Willis recommends for this purpose, besides the usual exhibition of antimonials, &c., that the patient be covered with a sheet, and have a sponge dipped in tepid water, passed over

every part of his body by the hour together, until the thermometer both in the axilla and mouth has been brought down from 106° or 108° Fahr. to 99° or 100°. This was the object of the cold affusion in the practice of Dr. Currie.

Mr. W. F. Daniell is at present prosecuting his enquiries in Western Africa on this interesting subject, and will probably soon enable us to judge more satisfactorily of the circumstances connected with this important subject.

In the work of Dr. M'William already referred to, the views of Professor Daniell, respecting the presence of sulphuretted hydrogen in the waters of the Niger, and in particular localities in the ocean, are contradicted, and the author seems more inclined to entertain the views of Dr. Willis respecting the bad effects of moisture and a high temperature. (1*).

Diseases of the Nervous System. The subjects which have of late attracted a good deal of attention, are those called *Tic Douloureux* and other *neuralgic affections* in different parts of the body. There are few diseases which have produced greater confusion of diagnosis than those of different nerves in various parts of the frame; whether the affection have been primary or sympathetic. How many cases for example have we seen which have been treated as inflammatory, when they were nothing more nor less than affections of particular nerves, either of the scalp, the thoracic parietes or other superficial parts—in which a good dose of morphia, belladonna, or some other powerful sedative has acted like a charm; when venesection, leeches, counter-irritation, &c., had been repeatedly adopted as for an acute inflammation. One of the best notices of some of these diseases is that of Dr. Hunt's work on tic douloureux in the British and Foreign Medical Review, which seems to be very complete of its kind and we only wish that investigations of neuralgic affections in all other parts of the body were conducted with as much care and success as in this instance. It will be our business in this place chiefly to direct attention to treatment and not to pathology or morbid action. This, however, requires the greatest care in these diseases, as the real cause or morbid process may be going on at some distance from the painful part, and although we may relieve the pain for the time, it will probably return unless the original source of mischief be attended to. If we can trace tic douloureux to any disorder of the digestive organs it will be best to begin with an emetic followed by a warm aperient. After this, Dr. Hunt chiefly relies on a course of arsenic. He begins with about four minims of Fowler's solution, increasing the dose till the stomach shows symptoms of irritation. It may then be left off for a short time and recommenced when the stomach has improved. An occasional aperient should invariably be also given, and after a time a grain of quinine three times a day will be a good addition; a mild farinaceous diet

* The figures at the end of the paragraphs in this retrospective summary refer to the articles in the preceding pages where the subjects are treated of more at length

should also be recommended, and if the stomach be very irritable, a good dose of prussic acid, three or four times a day, will be useful. Another set of neuralgic cases is owing to some congestion of the liver as well as confined or disordered bowels. These cases will be known by the muddy, sallow complexion with the other bilious symptoms. Here we find the croton oil very valuable, combined with an occasional mercurial; and followed, if the attacks be irregular and intermittent, with doses of belladonna or opium combined with camphor. But suppose that a patient comes to us without any symptoms of disordered digestion, but of a pale unhealthy aspect, denoting a deficiency both in the quantity and quality of the blood, we may suspect that the affection is owing to an *anæmic* condition of the system. In these cases we find *iron* of the greatest use. Extract of belladonna may also be given with advantage in half grain or grain doses.

When the uterus is suspected of giving rise to the sympathetic pain, Dr. Hunt strongly recommends his favourite remedy, arsenic. He thinks it "subdues morbid sensibility of the nerves." Belladonna and opium may here also be given with great benefit, and at any rate are certain to afford temporary relief.

The uterus is perhaps as common a cause of neuralgia in the female as anything else—we know how very common it is for the pregnant woman to complain of face ache, &c.; and Dr. Hunt relates one case in which, when the hand of the accoucheur touched the internal surface of the womb to extract a placenta, it instantly produced the pain in the face to which the female had been previously subject.

Another frequent cause of tic douloureux is a bad tooth, or some other irritating mechanical cause, which of course must be removed if possible. Sometimes the affection, especially when it attacks the sciatic nerve, is of a rheumatic character, and will be best relieved when colchicum is combined with the other remedies. In such cases we must also give calomel in combination with opium.

In almost all cases of neuralgia, however, we shall find ourselves obliged to rely chiefly on sedatives. We may combine other kinds of treatment, but sedatives must always be more or less administered, and no cases will bear them better than these. What kind of sedative then ought we most to depend upon? Dr. Hunt's favourite medicine is evidently belladonna; and the largest dose he has given is one grain every hour for three successive hours. If this be considered too strong a dose, the patient may take less at a time, as a third, or half a grain, and continue it once or twice a day, according to its effects. A grain may be given at any time when the paroxysm comes on, provided the patient be old enough for such a dose. In our own practice we have found much more certain and manageable effects to be produced by narcotising doses of the acetate or muriate of morphia; and indeed we seldom fail in completely relieving the most violent neuralgic affections of the scalp, face, intercostal spaces, uterus, and sciatic nerve, provided these be recent and unaccompanied by much inflammatory action, by a quarter of a

grain of the acetate of morphia every hour, for about three or four consecutive hours. The whole success will depend upon overcoming the patient within the first few hours, and for this purpose a single grain of the above preparation, given within a few hours, will almost invariably be sufficient. It will intoxicate and nauseate the patient, and of this he should be informed, or he will for the time think the remedy worse than the evil. But this, although frequently by regular repetition whenever the paroxysm returns it may ultimately cure, also frequently fails of imparting permanent relief. In such cases *arsenic* will be found one of our most valuable medicines, when the stomach will bear it. It is evidently Dr. Hunt's favourite remedy, and will be chiefly useful "in those of lax fibre, languid circulation, cold and moist skin, and whose urine is pale and plentiful." On the contrary, it is contra-indicated "where the urine is scanty and high coloured, with lithate of ammonia sediment, the tongue loaded, and especially its tip and edges red." It is also proper to administer this remedy "when the disease arises from malaria, and is strictly intermittent, or when it depends upon a neuralgic habit or disorder of the womb." (3.)

Belladonna seems to be increasing in the estimation of the profession in these cases of neuralgia. Mr. Norman relates a case in which one-sixth of a grain was continued every six hours for two days, without much effect; but when he gave one-fourth of a grain, with half a grain of disulphate of quinine every four hours, the patient became affected after the sixth dose with delirium and dilated pupils. This, however, was followed with considerable relief, although a very obstinate case In another case Mr. Mortimer states that two grains of this medicine were given by mistake, and although followed by alarming symptoms the pain never returned. (7.)

We are reminded by Dr. Black that this disease generally affects those nerves which pass through osseous or unyielding canals and orifices: the belladonna, therefore, in these cases cannot act in its usual way by relaxing muscular fibre, but as a powerful sedative, like opium and other medicines of a similar kind. The explanation of Dr. Black, however, may explain the reason why many of these cases are so obstinate, as we all know how slowly nature remedies any unhealthy condition of tendinous or periosteal structure. (5.)

The inoculation of sedatives has also been recommended in those cases where other remedies have failed, as the salts of morphia. But we should not, for our own part, depend much on this process. (6.)

A much more likely external application is the one used by Dr. Debreyne, viz., half an ounce of extract of belladonna, and two scruples of powdered opium, rubbed up with half an ounce of lard. A small portion, the size of a nut, to be well rubbed into the part three times a day. This external application of belladonna may be combined with its internal administration, taking care to suspend it as soon as any poisonous effects manifest themselves. (8.)

This physician seems to place as much confidence in belladonna in some cases of *hysteria* as he does in neuralgia. His favourite pills

are composed of extract of belladonna, camphor, assafœtida, and opium; which he likewise administers for *chorea*, and other general or partial nervous trembling. For *paraplegia* and *local palsy*, this physician has great confidence in *nux vomica*, which acts especially on the spinal column. He gives one grain of the alcoholic extract of nux vomica, increased, if necessary, to two grains, three times a day, until the patient experience some of its poisonous effects, as cramps and spasmodic twitches, or tetani-form rigidity in the limbs. The medicine must then be suspended, or the dose considerably diminished, until these symptoms decrease, when it may again be resumed. Of course it will be more beneficial in paraplegia than in hemiplegia.

This opinion of Dr. Debreyne is corroborated by a case of paraplegia, published by Dr. Badeley, of Chelmsford, in which strychnine was remarkably beneficial. This patient entirely lost the use of her limbs, after an attack of pneumonia. Besides other measures, one-sixth of a grain of the extract of nux vomica was given every six hours. This was increased to one-third of a grain every night; but still no beneficial consequence followed, till one-twelfth, gradually increased to one-eighth of a grain of strychnine was given twice a day, combined with a little calomel and colocynth. In three weeks the patient began to have *prickling* sensations in the limbs. The dose was now increased to one-sixth of a grain, combined with an aloetic pill, and in four days the patient recovered the use of her feet. Here was evidently a case of *functional* paralysis without organic disease, and therefore well adapted to test the value of strychnine. The reason probably why Dr. Badeley failed with the nux vomica, was, that he gave it in too small doses: in fact no effect seemed to be produced by the doses which he administered. This we can readily believe when we see the doses given by Debreyne, which we have just noticed. This physician, it will be seen, generally commences with one grain of the alcoholic extract, and increases it to *two grains* three times a day; and this he continues for some weeks unless poisonous symptoms manifest themselves. (9.)

We think Dr. Debreyne's formula for various *hepatic affections* and *visceral obstructions* a very good one. It is as follows:—Pulv. Aloes ℥ij.; Sapon. Hispan. Pulv. Rhæi Ferri Subcarb āā ℥iv., Potass. Iodur. ℥ij., in Pil. 120 divid.—Dose from two to six pills in the course of the day. In *dropsical affections*, where other symptoms do not contra-indicate a stimulus, his *medicated wine* will be found useful. It is composed of Rad. Julap. contus. ℥iiss.; Rad. Scillæ contus. ℥iiss.; Pot. Nitr. ℥v.; Vini Albi ℔i.—Dose from one to three table-spoonfuls thrice a day. And when wine is not called for, we shall find the following combination very useful:—Pulv. Digital. ℥iv.; Pulv. Scammoniæ ℥ij.; Pulv. Scillæ ℥ij.; Extract Juniperi q s., ut fiat massa in Pil. 120 divid.—Dose from one to two pills three times a day. These pills will be especially useful in hydrothorax.

Dr. D. depends chiefly on belladonna combined with elecampane and squill in cases of *asthma*, and many other cases of pectoral

affections, when they are unaccompanied with fever or inflammatory irritation. In *hooping cough* also he finds the belladonna very useful; but in both this and the former affection he prefers the *powdered root*, of which he gives one-third of a grain three times a day to a child one year old, and increases the dose according to the age of his patient. (8.)

The value of belladonna in cases of *tetanus* has been repeatedly pointed out. It is surprising what large doses of the different sedatives may be given in this disease. Dr. Hutchinson, of Nottingham, publishes some cases of this description, in one of which five grains of the extract were successfully administered, and in another the dose was ultimately four grains every two hours, until the disease was completely subdued.

From the success of this treatment in tetanus, Dr. Hutchinson recommends that large doses of belladonna be given in cases of *hydrophobia*, so as to relieve the spasms affecting the muscles of the glottis and larynx. (10.)

A good deal has lately been said and written about *stammering*. Amongst such a variety of opinions it would be difficult to decide which is the true one; and where the causes are evidently various, each writer may probably have some grounds of confidence in the truth of his own doctrines. M. Jourdant thinks that one large class of cases is owing to the way in which air is *expired* during articulation. The stammerer inspires well enough, but he blows his breath out before he has half done his sentence, and consequently attempts to articulate the remainder of his sentence with little or no breath at all. The sudden contraction of the chest throws such a large volume of air upon the vocal organs, that they are not able easily to contract for the purpose of articulation. For this reason M. Jourdant recommends that the air be detained in the chest as much as possible, and allowed to escape very slowly, when required. This may be accomplished by constant practice and determination. (11.)

Organs of Respiration.—Few important remarks of a practical nature have been made by writers on diseases of these organs during the last half year. There is one very interesting paper, by Dr. Peebles, in the *American Journal of Medical Science* on *eupatorium perfoliatum* as a valuable remedy in some cases of bronchitis. It is commonly called *boneset* in America, from its peculiar effect of relieving pains in the limbs and muscular system which attend many kinds of fever. It was this virtue which first suggested its use in epidemic influenza, and if we may judge from Dr. Peebles's account it is a very powerful medicine; relieving, in a very short time, those pains in the back and limbs, and that general lassitude of the muscular system which are so troublesome in this disease. This effect can only be caused by its action on the nervous system. But it seems to possess many other good qualities; amongst which we may name its *diaphoretic* properties. It is said to restore the healthy function of the skin, rendering its texture firm and healthy.

Antimony acted with equal power in producing perspiration, but

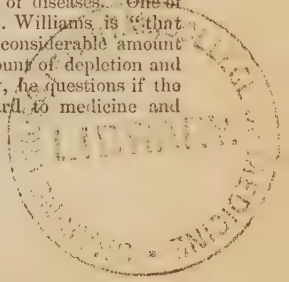
this was not rendered healthy and inoffensive as it was by the boneset. But we suspect that its value as a medicine will be found to consist more in its powers as an *expectorant* than in any other property. Dr. Peebles says that in this respect it is much superior to the lobelia inflata. This last medicine we have used extensively for many years, and we can say with confidence that it is one of the most valuable expectorants we possess, in many diseases of the bronchial membrane, where there is no combination with pneumonia, being even superior to antimony; and when combined with this medicine, being the best expectorant we possess. If the eupatorium, therefore, be found, as Dr. Peebles says, superior to this, we think it will prove an excellent medicine; possessing not only the sedative properties of opium, but also the expectorant power of antimony, ipecacuanha, squill, &c. It is also a gentle *aperient*, so that during an attack of influenza no other aperient was required; and lastly, it is a good *tonic*. So that we think few medicines will be found to possess so many valuable properties, and we only fear that Dr. Peebles's high encomiums are too good to be true. There are many cases of bronchitis which partake so much of an *asthenic* character from the first, especially in the aged, and often in children, that we are early compelled to combine ammonia with our expectorants. The eupatorium perfoliatum will probably combine some of the stimulating properties of this medicine, modified, at the same time, by its sedative, diaphoretic, and expectorant virtues, that we shall possess a medicine combining in itself the apparently contradictory qualities of opium, antimony, and ammonia. This would indeed be almost too good news to be true; and for our own part we must wait for further experience before we can rely implicitly on all these good qualities. The mode of its preparation will be found in our fifteenth article. (15.)

Organs of Circulation.—There are few subjects more interesting in the present day than the study of the healthy and morbid fluids of the body; the blood, the different secretions, and the excretions. And notwithstanding the importance of the subject, we are persuaded that there are comparatively few medical men who attend sufficiently to the subject. The study is considered too troublesome and not sufficiently practical. But what can be more useful and practical than the detection of the first appearances of albuminuria by an examination of the urine? and what can lead to more important indications of treatment than the discovery that the blood is deficient in certain of its constituents, and contains too great a quantity of the rest? For example, in some diseases it is found that the blood contains too much fibrine and too few red globules, and that the serum is very deficient in albumen. In some constitutions there seems to be naturally a smaller proportion than usual of red globules, and if in these an acute disease manifests itself, there will probably be an increase of fibrine without a proportional increase in the red particles. Upon this and a few other circumstances rest a good deal of the character and tendency of the

humoral doctrine of the present day. And most practitioners are now aware that there are many unhealthy conditions of the system which apparently depend upon some change in the condition of the blood, and which are to be remedied by paying attention to this subject.

For example, we are persuaded that we have been the means, in numerous cases of late, of so altering the constitution of the blood where there have been evident symptoms of threatened tuberculous disease, that phthisis has for the time, at least, been averted: not particularly by medicines, but by a vigorous and persevering exhibition of strong animal broth and other nutritious articles in as large a quantity daily as the system could possibly contain. The good effects of diet do not always depend upon the appetite of the patient: the blood may be enriched, and the proportion of red particles may be restored even although the patient loathe the food he is taking. The blood, therefore, ought to be well studied by the practitioner; and when we remember its dense and deep colour in inflammatory affections, its general softness or poverty in organic disease, as in cancer or scrofula, and its peculiar constitution in albuminuria, we think we are correct in stating that it ought to be one of the first objects of study to the medical man. (17.)

Diseases of the heart have for some years formed a prominent subject of study, and yet their occasional obscurity and frequent complication with other affections render them difficult of treatment. Some good remarks on this subject have lately been made by different writers. Most, if not all diseases of the heart may be divided into two classes, first, those in which the heart is *defective* in action, secondly, those in which it is *excessive* in its action: and our treatment must be in accordance with this division. If the heart be *excessive* in its action, as in hypertrophy and inflammation, the treatment will of course be antiphlogistic, although greater care than in other inflammations and hypertrophied organs is here required for fear of reducing the system so low that a greater train of evils may follow. If there be *defective* action we must stimulate; always remembering that in heart disease there may be too much blood for the heart to propel, in which case we shall be obliged at the same time to take some away either by leeches or venesection—thus employing, as it were, two contradictory measures in order to restore the balance between the organ and its contents. In other cases the heart is not only defective in its power, but the patient has evidently a deficiency of blood in his system, and will not bear any depletion whatever. It is very useful in practice to bear a few general rules in mind in the treatment of any particular class of diseases. One of these general rules mentioned by Dr. C. J. B. Williams is "that diseases of the aortic orifice connected with a considerable amount of hypertrophy, commonly require a great amount of depletion and an antiphlogistic treatment." On the contrary, he questions if the same treatment should be observed with regard to medicine and regimen in lesions of the mitral valves.



"The diseases connected with the mitral orifice are more commonly attended by weakness of the system and the circulation, by which the pulmonary organs may be greatly congested; and mild tonics should be administered at the same time, or subsequently to other remedies." A favourite practice of this physician is to administer diuretics combined with mercurials after any of these attacks, and his favourite pill is composed of two grains of blue pill, two grains of extract of henbane, one grain of quinine, one grain of squill, and half a grain of powdered digitalis. We should not agree with his opinion when he says that *dry* cupping in these cases is as exhausting as when the scarificator is used. He maintains truly that the blood which is drawn into the cellular texture is decomposed, and is no longer useful to the system, but it would require a great degree of dry cupping to take a pint or two of blood from the circulation. If there be any tendency to gout or rheumatism, we must combine colchicum and iodide of potassium, with our other medicines. One of the most frequent complications of heart disease is dropsy, which has to be treated with diuretics and purgatives, as acetate of potash, combined with digitalis or squills, nitre, juniper, &c. But few combinations will answer better, according to Dr. W., as a diuretic, than the pills just mentioned. The congested state of the kidneys is also to be relieved by elaterium, when this medicine can be borne by the stomach; cream of tartar taken every morning in doses of from half an ounce to an ounce, is another favourite remedy of Dr. Williams. It produces watery stools to a great amount. The tincture of digitalis and tincture of cantharides, will also be found useful; and a course of iron is combined with diuretics by Dr. Abercrombie—as squills, with sulphate of iron. A general rule in many of these heart diseases is to proportion the diet to the digestive powers, and to the excessive or defective action of the organ; especially avoiding the depleting and lowering systems when any albumen appears in the urine, showing that the kidneys are about to give way.

In prescribing diet to a patient, we ought to remember that by far the greater number of cases of heart disease proceed from nervous irritability. The food should never be in too great bulk, and therefore vegetables are to be avoided as much as possible. Animal, combined with farinaceous, food is better than slops and too much liquid. (19.)

One of the most valuable medicines which we possess in the treatment of diseases of the heart is *digitalis*. It is rather surprising to find that even on the value of this medicine there should be so much difference of opinion amongst practical men. This will arise, we suspect, from the different preparations, the powder, tincture, and infusion, being used indiscriminately without reference to the sedative powers of the one, and the diuretic powers of the other, as we shall point out in an admirable paper by Dr. Munk. There is one disease of the heart in which Dr. Henderson has shown that digitalis must be highly prejudicial, viz, a *patency of the aortic*

opening. When this disease exists, the blood will necessarily be regurgitated into the left ventricle, and ultimately produce enlargement of its cavity; so that under the influence of digitalis the ventricle will act less powerfully to empty itself of its contents, regurgitation will be more complete, and the cavity will consequently be habitually distended and eventually permanently enlarged. These are the views of Dr. Corrigan, as well as of Dr. Henderson. It is well, therefore, whenever we suspect incompetency of the aortic valves, to avoid giving digitalis, or doing anything which may diminish the capability of the ventricle to empty itself regularly of its contents. Digitalis, according to Dr. Corrigan, will be found to aggravate the sufferings of the patient; "his oppression will become greater, the action of the heart more laboured, the pulse intermittent, general congestion and dropsy will be increased, and in some instances *bronchitis* from congestion have been induced; and the respiration becomes more laborious." This opinion, however, is not always correct if we may judge from facts, although it is a view which ought always to be remembered in the treatment of this disease, as we are persuaded that the too common and indiscriminate use of repeated bloodletting, spare diet and digitalis for heart disease is a very improper practice: some of these cases requiring a treatment exactly opposite. Dr. Schonlein, of Berlin, says that he does not agree entirely with these opinions, which are likewise held, to some extent, by Dr. Stokes. But we confess that in reading his remarks on this subject, we cannot find out much difference of opinion between him and the above-named gentleman. He argues that digitalis renders the pulse more slow and regular, and the heart is in consequence *less tumultuous* in its movements. But it does not follow that because the contractions are more regular that they are more energetic. The fault in this case is an inability of the ventricle to get rid of its contents, and it is quite evident, therefore, that any thing which acts as a sedative must impair that action more or less, and act injuriously. This, after all, seems to be the opinion of Dr. Schonlein, if we may judge from the following sentence:—"If the simple bellows murmur is existing, we may presume that the impediment is not a very considerable one (only partial ossification of the valves): the more the sound approaches, however, to that caused by a file or rasp, the more it has a metallic, wiry, cutting sound, the more we may calculate upon a greater degeneration of the valves; and digitalis, in this latter case, should be employed with considerable caution." (20.)

This subject, however, we think, will be materially explained by considering the very different effects which the different preparations of digitalis have been found to have on the system; a circumstance which is seldom alluded to in the best works on Materia Medica, not even excepting the admirable work of Dr. Pereira.

The interesting paper, by Dr. Munk, seems to throw considerable light on this subject, and if further experience prove the truth of his observations, we may administer this valuable remedy with much

more confidence and success than have yet attended our use of it. He shows from a series of cases that this medicine has two very different effects on the system, one as a *sedative* and the other as a *diuretic :* and that the *tincture* acts most powerfully on the heart as a sedative, while the *infusion* acts chiefly on the kidneys as a diuretic. He does not value the powder highly either as a sedative or diuretic when given alone, being more uncertain and unmanageable in its effects ; but when combined with squills and mercury its influence is more certain on the kidneys, but still not to be depended upon as a sedative. The administration of digitalis in diseases of the heart requires more caution than is generally acknowledged, especially when the aortic orifice is implicated in the disease, as already pointed out : but where a depressant or sedative really is required, we ought to administer the *tincture* of digitalis in preference to any of its other preparations ; and this may be given alone in tolerably full doses, at intervals of eight, ten, or twelve hours. This action of the drug has not been found to be particularly increased by combination with conium, hyosciamus, hydrocyanic acid, &c., as many have supposed. On the contrary, when we want to subdue *tumultuous* action of the organ, its effects will be increased by combination with the different *antispasmodics*, such as camphor, assafœtida, galbanium, ammonia, and Hoffman's anodyne. Dr. Munk gives the infusion in the dose of half an ounce to an ounce every six or eight hours, and occasionally recommends very gentle exercise, in order to prevent its action on the heart. If in the course of a week it takes no effect he relinquishes its use for the time :—but if it take proper effect on the kidneys it may be continued for a considerable time without injurious consequences. Indeed, both he and Dr. Pereira seem to deny altogether the dangerous effects attributed to this medicine by some writers. (21.)

In connection with diseases of the heart we may allude to some recent opinions on *gout*, which is so often the cause of some of these affections. We are indebted to Mr. Ure for many useful observations on this subject. His remarks on the utility of the benzoic preparations in controlling phosphatic deposition has been alluded to in Retrospect vol. 3, art. 24, and vol. 4, art. 12. Also in the Medical Gazette of February, 1843. In another paper published lately he shows that, from the experiments of Frommherz and Gugert, for some time before a fit of gout the urine contains no uric acid, whereas at other times it is well known that there is a superabundance. The uric acid therefore is pent up, and circulates with the blood, forming urate of soda through the medium of the serum of the blood ; and the salt by thus intermixing with the blood is supposed to cause many of the phenomena of this disease. Dr. Furnivall, in a paper which he has written on the effect of alkalies in this affection, asserts that he has long been in the habit of averting the effects of gout on the heart by these remedies, but offers no further explanation of their action than that they correct that acidity of the blood which is often found to exist in these cases. The blood in health is found to be slightly alkaline. Any acidity, therefore, will be stimulating to the heart and

blood vessels ; and when this is connected with another fact, viz., the increase of fibrine which Andral proves to exist in the blood during an attack of rheumatism, we have two circumstances which must strongly tend to excite inflammatory action in the serous membranes of the cardiac ventricles and of the left ventricle in particular. With these views Dr. Furnivall has used alkalies extensively in these cases since 1830. He prefers the liquor or carbonas potassæ, and continues the use of this medicine till all acid diathesis ceases to exist. (22.)

Mr. Ure suggests another mode of treatment which may be combined with the use of alkalies. It has often been noticed that when the uric acid increases, the secretion of bile decreases, and vice versa. For this reason all those remedies which cause an increased secretion of bile are beneficial in diminishing more or less the uric acid diathesis. This he asserts to be the particular effect of *sulphate of manganese*, which M. Gmelin has shown, by injection into the blood vessels, to augment the biliary secretion so much as to produce a deep yellow staining of the coats of the intestines, and of the great vessels in the vicinity. Mr. Ure recommends that a drachm of this sulphate be dissolved in about half a pint of water and swallowed before breakfast. It will be followed by one or more liquid stools of a biliary description, and does not occasion those lowering and distressing effects which occasionally follow the exhibition of calomel and antimony.

Organs of Digestion.—On this subject but few practical suggestions of a very important nature have been published of late. Dr. C. J. B. Williams points out the value of sugar of lead combined with opium, oil of turpentine, and the muriated tincture of iron in cases of *hematemesis*. In *enteritis* when the attack is recent he recommends that the bowels be evacuated *before* the antiphlogistic treatment is adopted ; but when the inflammation has existed for some time it is better to adopt the antiphlogistic treatment *first*, and follow this with a sufficient dose of calomel, which he regards as the best aperient in such cases. He gives from five to ten grains of calomel, combined with five grains of conium, and a little James's powder, and if this does not answer in three or four hours he repeats the dose. Belladonna may be combined with the calomel instead of the conium. If this second dose fail, it is better to use injections of castor oil, three or four drachms, mixed with the yolk of an egg. Cases will frequently occur where these measures will fail in producing a good evacuation, We must then resort to other and more powerful purgatives ; but on this subject we should, with all due deference to Dr. Williams, object to his use of croton oil, which he says may occasionally be required. We have likewise used this medicine occasionally in these cases, but have almost invariably regretted doing so, and should now resort to it with the greatest reluctance. Indeed the use of purgatives at all in such cases is in our opinion a very questionable practice. If, however, it be thought absolutely requisite to empty the bowels, and the ordinary aperients fail in doing so, Dr.

Williams recommends very strongly the tobacco injection. A scruple of tobacco may be infused in half a pint of water, and the injection may be retained for ten minutes. After the free evacuation of the bowels it is best to give opium, either alone or combined with mercury, in order to bring the bowels into a quiescent state and remove the effects of inflammation. (26.)

Urinary Organs.—Next to diseases of the heart and organs of respiration we think that those of the urinary organs have lately attracted most attention and given rise to the most important improvements in treatment: and yet we are persuaded that it is a subject which is very much neglected by all classes of practitioners, some even attending cases of granular disease of the kidneys without either taking the trouble, or perhaps not being sufficiently conversant with the method, of testing the urine; and consequently working almost entirely in the dark. This is the more inexcusable since this analysis is comparatively easy, and seeing that it is of vital consequence in many cases in which we have complications of heart disease. Mr. Ross, of Camberwell, relates a series of cases in which he shows the intimate connexion which exists between the suppressed action of the skin and the appearance of albumen in the urine.

There is one observation of Mr. Ross, the truth of which we think very doubtful; and since his paper was published we have minutely examined the question in a case which has occurred in our own practice; and that is, that when there takes place an effusion into any serous cavity, and particularly into the peritoneal sac, in a case of albuminuria, the kidneys become considerably relieved, and the secretion of albumen now takes place into the serous cavity instead. On the contrary, when the skin is dry, and the anasarca mounts only to the hips, the urine will be loaded more or less with albumen. This we have not found to be the case; but, on the contrary, that the albumen in the urine continued to be equally copious, whether the peritoneal cavity was distended or not. Mr. Ross's cases, however, seem to warrant him in coming to an opposite opinion, viz., that "when effusion into a serous cavity and into the cellular tissue takes place at the same time, the urine will be albuminous, or not, in proportion to the quantity of effusion in either case. If the effusion into the abdomen or chest exceed in amount that into the cellular tissue, then the albuminuria will decrease, and vice versâ." The skin is considered to be a *specific excretory gland*, for the purpose of secreting albumen, as the epidermis, hair, nails, &c.; so that when this function of the skin is suspended, Mr. Ross supposes that the kidneys are obliged, as it were, to take up this office, "and they will do so with the more facility in proportion as they have undergone the state of granular degeneration." The experiments of Fourcault, which had been instituted for the purpose of ascertaining the real function of the skin, seem to corroborate some of these views. He shows that by suppressing its functions by means of an impermeable varnish, albuminuria, amongst other consequences, is the result; and that when this function is considerably, but not completely, suspended

it occasions the general phenomena which are observed in fevers and inflammations; thus corroborating the views entertained by Dr. Willis, as will be seen in our first article. Fourcault likewise shews from these experiments, that when the function of the skin becomes completely suppressed, there takes place a considerable fall of temperature in the system, and, eventually, cutaneous asphyxia; the blood acquiring the refrigerant and stupifying properties of venous blood.

Dr. Lever has remarked that in nine cases out of ten of convulsions in puerperal women, the urine is albuminous. This he accounts for from the fact that the gravid uterus occasionally compresses the emulgent veins, and so prevents the due return of blood from the kidneys; an explanation which he derives from Mr. Robinson's "Researches into the connexion between compression of the blood in the renal vessels and certain abdominal matters in the urine," in which this gentleman has satisfactorily proved that causes which induce congestion of the kidneys, by preventing or obstructing the return of blood through its veins, as abdominal tumours, &c., will produce renal congestion, and consequent albuminuria." This interesting paper, by Mr. Robinson, has just been published in the 26th vol. of the "Medico-Chirurgical Transactions." His experiments seem to us to be conclusive in shewing that unnatural compression of the blood in the renal vessels, whether produced artificially or by disease, will give rise to phenomena identical with those constituting the primary effects of inflammation, and eventually leading to a more or less copious secretion of albumen. He says, "This compression is altogether dependent upon the co-existence and co-operation of two essential causes, each of which will, in different individuals, vary much in its amount of activity or degree of completeness. The momentum of the arterial blood arising from the contractions of the ventricle, constitutes the active force from the operation of which the compression takes place. But, as a counter-resistance is required before an intense degree of the latter state can occur, it is only when some extraordinary obstruction to the free passage of the blood *through the smaller vessels* exists, that the effects of an undue compression of that fluid are perceptible. It follows, therefore, that the momentum being equal in a number of cases, the intensity of the compression of the blood will be proportioned to the completeness of the obstruction; and on the other hand, the impediment or obstruction being equally complete, the degree of compression will then be commensurate with the amount of momentum.

Mr. Robinson's experiments also prove "1st, That simple compression of the blood in its smaller vessels, will, in a direct ratio to the degree of intensity of that compression, cause the exudation of an albuminous fluid, of coagulating lymph or the extravasation of blood. Its immediate effects, therefore, precisely resemble those of inflammation; and as it is well ascertained that both the essential causes of undue compression, (viz.. an obstruction or impediment to the flow of blood through the vessels of the inflamed part, and excessive action of the heart,) coexist in that disease, it seems but reasonable

to infer that the primary effects of inflammation, being identical with those of undue compression of the blood, are the mere consequences of that physical cause. 2nd, That there is no relation between the composition of the effused matters, and the extent of the dilatation of the coats of the vessels, as measured by the quantity of blood they contain."*

These experiments of Mr. Robinson seem therefore to offer an easy explanation of the existence of albuminous urine in pregnant women; and in future it would be well for medical men when they meet with cases of œdema of the face, eyelids, &c., or disordered states of the kidneys, to examine minutely for albumen, and where this is present to be on their guard for fear of puerperal convulsions. These will probably be found to be more severe when the urine has been albuminous during pregnancy, than when it only becomes so during labour. In this latter case the convulsions will generally be milder, and the urine will be albuminous for a shorter time than in the former case. In the sthenic form we must have recourse to active depletion, tartarized antimony, and purgatives; taking care to interfere as little as possible with the os uteri.

The treatment of a case of ordinary albuminuria will depend in some measure on its complications—especially with cardiac disease. If it be an acute case in which there is reason to suspect an inflammatory and congested state of the kidneys, the first step will often be to diminish the quantity of unhealthy blood by bleeding; this should be accompanied or followed by hydragogue purgatives. Some practitioners prefer giving large doses of bitartrate of potass, as half an ounce or an ounce every morning; others prefer elaterium when the stomach will bear it. Some prefer acting entirely on the alimentary canal, for the purpose of relieving the renal congestion and diminishing the quantity of liquid in the system, while others combine the use of diuretics of a more or less powerful nature. This latter mode, however, can only be admissible when the acute stage of inflammation has subsided, and when their use can have no irritating effect on the parts. The combination of the infusion of digitalis, as pointed out in Dr. Munk's paper, may probably be useful in all stages of the disorder, and especially as cardiac disease is so frequent a complication. (33.)

The nitrate of urea has been very successfully administered as a diuretic by Mr. Kingdon, when the ordinary diuretics had failed. In a case of anasarca of some standing he gave one grain of this medicine, with a grain of calomel every night and morning, for twelve days, when the œdema completely disappeared. The dose may be increased to one grain and a half or more three times a day. (40.)

In some cases of dropsy Dr. Fife prefers the croton oil to elaterium. He gives it in doses of three minims every night—a very large dose, in our opinion, and one which could only be proper

* See Med. Chir. Trans., vol. 26, p. 51.

in particular cases. In one instance, however, this dose seems to have been continued with advantage for ten or eleven weeks, reducing a case of ascites of ten feet in circumference, when the ordinary methods of treatment had failed. (34).

In the treatment of uric acid gravel Dr. Golding Bird suggests that the phosphate of soda, in doses of ℈i. to ℥ss., given three times a day, may be even preferable to the pure alkalies and their carbonates, as these so frequently disorder the digestive organs when given and continued for any length of time. (36.)

In our last Retrospect we referred to the treatment of acute rheumatism by large doses of nitrate of potass. Dr. H. Bennet again refers to this subject, and places before us the treatment of some of the most eminent practitioners in Paris, as well as his own. In chronic rheumatism he has not found this medicine of much use. The doses seem to us to be enormous, and we certainly should not have ventured to administer them, except by the recommendation of experienced men. An adult male may begin with six drachms in twenty-four hours, and a female four drachms, which may be rapidly increased to eight, ten, or twelve drachms. It is particularly necessary to remember that these doses would be injurious, unless dissolved in a large quantity of some liquid, as weak lemonade or barley water, in the proportion of about four drachms of nitre to a pint and a half of gruel. After the first 24 or 36 hours the pulse diminishes in strength and number, the urine may be increased or not, the skin begins to act profusely, and continues to do so for several days. M. Martin Solon thinks the action of the nitre is chiefly as a sedative on the circulation, and does not give sufficient credit to its action on the kidneys and skin. If the salt be continued, the disease will often, in about ten days, give way very satisfactorily, and will cease to pass from joint to joint. If, however, in five or six days we find no good effect from its use, it will be well to discontinue it. (42.)

For the same disease, Dr. Popham has lately used the cinchona bark with success. This is a remedy which many years ago was much used by Dr. Haygarth, of Bath; and the late Dr. Davis also wrote a paper on the same subject. Cases of acute rheumatism sometimes put on an intermittent or periodic character, which first led to the idea of using this remedy. It will probably be found a good remedy in some cases of this kind, when some of the more acute symptoms have subsided; but if given when the fever is high, we should be afraid that it would be more prejudicial than beneficial. It will also be found more useful when the disease attacks the fibrous tissues, than when the synovial membranes are affected, and no doubt may assist very materially in recruiting the tone of the system, when it has been broken down by a long, or short and severe, attack of this tiresome malady. It may thus be found to be a valuable addition to the iodide of potassium and the other list of remedies. (44.)

Dr. Marshall Hall directs attention to the practice of excluding

air in the treatment of certain diseases. It is well known how beneficially this acts, even by the application of simple adhesive plasters, in chronic chest affections, lumbago, sciatica, and other forms of rheumatism and neuralgia. One of Dr. Hall's patients affected with sciatica was desired to envelope his limb in adhesive plaster. Being an ingenious joiner "he prepared the common stocking material with glue, dissolved in the proportion of one ounce to two pints of water, and had it spread over when dry, with galbanum plaster, and if this exuded it was dusted with flour. By the steady application of this plaster his severe rheumatism was cured." Dr. Hall suggests that many other cases, as some affections of the face, might be considerably benefited by the application of a layer of gelatine or isinglass dissolved in water, sufficiently thick to exclude all atmospheric air from coming in contact with the surface. This is, no doubt, a very ingenious, simple, and useful suggestion. (48.)

When an individual lives too well, and takes too little exercise, there frequently takes place a morbid plethora in the system. "The blood is loaded with nitrogenized principles and calcareous salts, and if the skin and kidneys fail in removing these from the system, they are sooner or later deposited upon the synovial membranes and the tendons, or within the arterial walls, in the former as urate of soda, in the latter as phosphate of lime." Now it appears that gouty people have frequently, if not always, an abundance of uric acid in their urine, except previous to an attack of the disease, when the kidney no longer excretes it; and it therefore is supposed to be circulating in the blood, in the form of urate of soda. This is shown, by Mr. Ure, to be the case by various experiments. He further states the remarkable relief which is afforded by a copious secretion of bile, and for this purpose recommends the *sulphate of manganese*, as we have before stated. A drachm of this is to be dissolved in about half a pint of water, and swallowed before breakfast. In a short time it is found to act beautifully on the liver, and to produce copious bilious stools, without causing the unpleasant effects which sometimes follow the use of mercury. It is probable that colchicum is often given too frequently and for too long a time, to patients who are subject to repeated attacks of gout. Sir B. Brodie thinks that its continued use suppresses the biliary secretion, and must therefore be given for shorter periods and more sparingly than is too often the case. Mr. Ure recommends as topical applications in these cases, acetic ether and rectified coal naphtha. About half an ounce of acetic ether may be gently rubbed over the part affected every twelve hours, care being taken that the patient is kept warm afterwards, or the coal naphtha may be pencilled over the part with a camel hair brush. (49.)

Some very interesting points of Surgery have, within the last few years, been more clearly elucidated in the operation for artificial anus. We are more particularly indebted to Amussat for bringing this subject before us in modern times. He would extend his

operations to almost every variety of malformation of the rectum. "He would apply it in every case of true imperforation of the rectum, in which it was possible to reach the gut, with the exception of those only in which the anus, otherwise well formed, is obstructed by a mere *superficial* membrane; but if the septum, however thin and yielding, however it may be distended by the accumulation of meconium, is situated *above* the anus, he insists that it is insufficient to destroy the septum, which method fails because of the difficulty of keeping an opening above the anus dilated; and M. Amussat therefore lays it down as a rule, that in such cases we should operate as if there was no anus, as if the rectum was completely deficient throughout the entire extent of its anal extremity; and cut backwards, and draw the rectum, not downwards to the anus, but directly backwards." When there is any considerable interval between the gut and the external parts, it would be difficult, if not impossible to draw the rectum downwards, so as to make it adhere to the external orifice, but the sigmoid flexure of the colon will enable it to be drawn down more or less from one to two inches. This elongation, therefore, will frequently extend to the neighbourhood of the coccyx, and M. Amussat in his third memoir recommends that the artificial orifice should generally be made as near the coccyx as possible. The reviewer of his work, however, does not agree with this opinion, but maintains that whenever the natural situation can be taken advantage of it is better to do so, in order to make use of the sphincter muscle. Another mode of forming an artificial anus is that which is commonly called Callisen's, which consists in opening the colon in the left lumbar region, where it is not entirely covered by peritoneum. M. Amussat has also improved this method, as well as extended it to the ascending colon. Instead of making a vertical incision in the left lumbar region he makes a *transverse* one, four or five fingers breadth long, "midway between the last false rib and the crest of the ilium; and he divides the deeper parts, or even the skin if the patient is fat, crucially, in order to gain room." The advantages of this mode of operating are, "1st, that it makes the operation easier and more certain, and avoids the danger of dividing the lumbar vessels and nerves; 2nd, that it facilitates finding and opening the intestine without wounding the peritoneum; and 3rd. it enables us to establish the artificial anus more anteriorly; with a view to which the opening in the intestine should be drawn forwards and secured to the anterior angle of the wound." M. Baudens, another French writer, objects to this mode of operating, and recommends an oblique incision instead of a transverse one. He also boasts of having discovered a certain way of ascertaining which is the colon, a step which is sometimes exceedingly difficult. His method consists in introducing a very fine needle, furnished with a canula, and on withdrawing the needle, either gas escapes or the canula is soiled with fæces. (58).

We consider that the excision of joints and disarticulation at the ankle are such important improvements in surgery that it is neces-

sary and beneficial to observe all fresh cases of the kind, which may in any way throw additional light on the subject. How many cases do we now see in the country, in whom amputation below the knee has been performed for disease and accidents below or at the ankle joint, when amputation at this joint, and the preservation of the hard skin on the heel might have secured to the patients the use of limbs almost as useful as the perfect ones We have to thank Mr. Syme for bringing this subject repeatedly and prominently before the profession; and more especially for making such a flap of the under part of the foot and heel, as to enable the ends of the bones to bear the necessary degree of pressure. In his earlier operations Mr. Syme seems to have made this flap too long, and now gives directions to perform the operation somewhat different. "The incisions across the instep and sole of the foot should be curved with the convexity forwards, and exactly opposite each other. A line drawn round the foot midway between the head of the fifth metatarsal bone, and the malleolar externus, will show their extent anteriorly, and they should meet a little way further back, opposite the malleolar projections of the tibia and fibula. If the ankle joint is sound, the malleolar processes should be removed by cutting pliers; but if the articulating surfaces of the tibia and fibula be diseased, a thin slice of these bones should be sawn off." The stump is conical and has for its apex the thick skin of the heel. When we consider how rarely amputation below the knee is performed for disease of the leg, and how much oftener for diseases of the foot and ankle joint, we may expect to see this operation come into much more general use.

In compound dislocation of the ankle joint, for example, will it not be safer to have recourse to disarticulation, than to attempt to preserve the whole limb? Many lives have been lost in attempting to retain the foot in these cases; only two out of thirteen cases in the Royal Infirmary of Edinburgh recovered; and even when the foot is saved it is so stiff and weak as to be rather an incumbrance. There is some reason in running considerable risk, when the only alternative would be amputation below the knee, but none when we remember that amputation at the ankle would not only considerably diminish the risk to the patient, but would secure as good a limb as in the other case.

Mr. Lyon, of Glasgow, points out the risk of sloughing to the under or posterior flap when it is made too long, as in some of Mr. Syme's earlier cases, and hence the necessity of adjusting its edges very carefully to those of the anterior flap, in order that it may receive blood from this as early as possible; and hence also the necessity of keeping up the temperature of the part by carded cotton, warm water dressing, or the like. It seems that in many cases the head of the femur itself may be excised, instead of having recourse to amputation at the hip joint. Dr. Bonino draws the attention of the profession to this subject in an interesting paper. There can be little doubt that when this is sufficient, and when the only alternative

would be amputation, it ought to be attempted. It is a practice, however, which has not yet been sufficiently corroborated by experience. (59.)

With respect to treating aneurism by compression, there is no doubt that its success in modern times, when it often failed before, is an interesting fact which probably hereafter may be extended to deep-seated aneurisms, which at present are nearly beyond the control of the ligature; but there is some truth in Mr. Syme's remark on the subject, that so long as femoral aneurism, for which it is chiefly used, is so easily remedied by the ligature, it becomes doubtful whether the more tedious process of compression need be used. Some of the most eminent Dublin surgeons, however, seem to advocate the measure; in some cases it ought, therefore, to have due consideration. We do not, however, see much notice of the process being adopted by the leading British surgeons. The operation of compression will probably be more valuable when the external iliac artery is the seat of the aneurism, as in a case published by Dr. Bellingham, where the tumour was situated in the right groin. Compression was made on the *distal* side, and afterwards on the tumour itself, with complete success. (60.)

Considerable difference of opinion seems to exist in the profession respecting the mode of performing, and the danger resulting from, the operation of paracentesis thoracis. One gentleman altogether denying the danger of the entrance of air, and another exalting this danger perhaps too much. There is truth on both sides: it being much less dangerous than is generally supposed, when performed sufficiently early, and the canula not allowed to remain in the wound: and on the other hand very dangerous when postponed too long, and when the instrument is allowed to remain in the wound till all the water or matter has been evacuated, and a fistulous opening has been produced. (61.)

We have generally something new to communicate respecting lithotomy; but we do not recommend every new notion on this subject to be tested by experiments on the living subject. It is proper, however, in all operations where the fatality is great, to pay attention to the opinions of experienced surgeons, when they offer any suggestions for its improvement. We suspect, however, that all the difference of opinion and success in these cases will resolve itself into the different degrees and methods of manipulation at the neck of the bladder; and that the greater success of one surgeon will depend very much on his choice of cases, and his skill in managing his deep incisions, rather than on the nature of the instruments themselves. To one, however, who is not well practised in the operation, the nature of the instrument will be of much more consequence, and for this reason—any knife which will only allow of a limited incision through the prostate, will be valuable. Mr. Syme, whose practical skill must entitle any suggestion of his to due consideration, recommends a knife, which he says must "obviate all risk of error in making the incision through the prostate. It is triangular in shape, straight,

and blunt on the back for running in the groove of the staff, and sharp on its convex edge from the point half-way backwards to the extremity; the remaining part being blunt, but thin. If this *prostatome* be pushed along the groove of the straight staff, until the blunt part is arrested by the prostate, it will sufficiently divide the neck of the bladder, and if the operator forces it further onwards, or even into the cavity of the bladder, no harm can result, from the blunt part of the edge merely anticipating the dilatation, which must otherwise be effected by the finger."

Dr. Post, of New York, recommends a modification of the bilateral operation, as performed by Dupuytren, of Paris, and Dr. Stevens, of New York; and for this purpose uses a peculiar instrument, which is described at page 151. Sir John Fife, of Newcastle, also operates somewhat after the method of Dupuytren. (62.)

On reading the papers of Mr. Phillips, and others, on the extraction of ovarian cysts, we remain of the same opinion which we stated some time ago, that the diagnosis and ultimate result of the operations are at present so uncertain, that where it is probable that life may be prolonged, it is better to trust to this than to risk the immediate loss of life by an operation which is so extremely dangerous. Mr. Phillips states it as his opinion "that we have not the means of determining with absolute certainty whether a tumour be an ovarian cyst or not; and that we have no sure means of ascertaining the contents and connections of tumours presumed to be ovarian." There have been numerous cases, however, in which it may have been perfectly correct to operate, but we suspect that these form the exceptions rather than the rule.

Mr. Isaac Brown brings forward cases of ovarian tumours which were dispersed without these severe proceedings. He made use of mercurials, diuretics, tonics, *tight bandaging*, and tapping. These cases, however, were of young unmarried women, in whom the reparative powers of nature may have been more vigorous, or in whom the disease may not have been so obstinate. The treatment was one adopted at the suggestion of Mr. Gibson, of Halstead. It consisted of mercurial friction over the abdomen, with flannel bandages tightly applied, mercurial alteratives, and steel medicines, varied by diuretics, such as acetate of potash, spirit of juniper, and squills. When the health was improved, and the size of the abdomen somewhat diminished, shewing that the cause of mischief was somewhat arrested, tapping was resorted to; and after this a pad was made of napkins, and tightly bandaged, so as to produce a good deal of pressure in the situation of the tumour: this pad was increased in thickness next day, and firm compression continued. The mercurial friction was continued on the inside of the thighs, and the diuretics again commenced. The pad was continued, and the compression increased as the patient could bear it. Several cases are related in which this treatment was successful. It will be necessary, however, to continue the treatment for a considerable time after the

tumour seems to have been dispersed, otherwise it will be likely to return. (60.)

In our seventh volume we referred to an interesting communication of Dr. Houston on the application of nitric acid to hæmorrhoidal tumours. He has lately published further remarks on this subject, founded on more extended experience. In some kinds of hæmorrhoidal excrescences, this application will probably be better than any other. In an inward bleeding pile, attended by a red strawberry-like elevation of the mucous membrane, it will be found a very valuable mode of treatment. It often happens that when the patient *strains*, or bears down, a small *vascular tumour*, very like a small or flat strawberry, can be seen on the surface of the mucous membrane. When nitric acid is applied to this kind of tumour, it causes a slough. The surface should be soft and clean before the acid is applied. In order to do it effectually, "the acid must be laid on in quantity, and rubbed in with force enough to be pressed into the pores of the surface. At the best it produces only a very superficial slough; and on this account it will be necessary in some cases, as where the tumours are old and firm in texture, to make a second and even a third application." There are, perhaps, few cases of the kind in which some other caustics, but especially in which the *actual cautery*, would not be equally and even more efficacious; but the value of nitric acid in cases which do not require a deep slough, consists in its ready application and in its unobjectionable character. A patient will readily submit to have such a mode of practice adopted, when he would be afraid of the actual cautery, although this might not be any more painful than the other; or, as Dr. Houston expresses himself, "if the surgeon can thus, by the substitution of an acid for the knife, the noose, or the red hot iron, succeed in stripping his services of their terrors, he will, by gaining upon his patients, steal a march upon the disease, and thereby find an opportunity of applying to it an easy, because an early, remedy." It is seldom that the application of the acid is painful. If the patient be very irritable, it may be well to give an opiate. These cases are very common. A patient, perhaps, is in the habit of parting with blood at stool, with more or less prolapse of the bowel, on the surface of which will be seen one or more of these vascular strawberry-like tumours, from which the hæmorrhage evidently arises. The nitric acid may be rubbed in with a piece of stick dipped in it, and the part may be immediately smeared with a little oil. The sloughs will come away about the sixth or seventh day. It will occasionally happen, however, either that the surface of the tumour is not soft enough for the acid to take effect to a sufficient depth, or that it is too large and extensive for such a superficial slough as that usually caused by nitric acid to be of much use; in this case we must have recourse to the *actual cautery*, which Dr. Houston applies in the following way:—He introduces a speculum with a slit or hole in its side, so that the tumour, with a portion of the mucous membrane, if requisite, will squeeze through and appear within the speculum. The red hot iron is then applied

to the spot, and if there be much prolapse of the bowel a small portion of the mucous membrane may also be touched with it. A slough of sufficient depth will thus be made, and after the healing of the mucous membrane, it is probable that the prolapsion of the bowel will be cured. There is no doubt that the actual cautery would be the best and most certain means of causing a slough in *all* cases of this description: either a superficial or deep slough may be caused at pleasure; but in all cases where a deep slough is not necessary, the nitric acid will be found equally efficacious, and much less repulsive to the feelings of the patient. (64.)

In cases of division of the trachea, or larynx, we would strongly recommend surgeons to bear in mind the advice given by Mr. Stanley, viz., not to be satisfied to bring the outward parts together by means of ligatures, &c., trusting afterwards to position to complete the cure, but to introduce a ligature or two through the windpipe itself, or through the fibrous tissue connecting the cartilages, so as to prevent the lower portion retracting. In a case of cut throat, however, the surgeon must not apply his sutures immediately, as he might very naturally feel inclined to do, but wait a little to see what blood has escaped into the windpipe, and allow it to make its escape before closing up the aperture. When the wound in the trachea is only partial, position alone may generally be sufficient. (66.)

The use of tannin, or tannic acid, externally, will be found especially valuable in sore nipples, excoriations about the anus and scrotum, piles, leucorrhœa, aphthous sores in the mouth, toothache, severe salivation, and relaxed sore throat. For sore nipples, Mr. Druitt uses it in the strength of five grains to the ounce, on lint, and the part to be covered with oil silk. For that troublesome itching about the anus and scrotum, so teasing to some people, he prefers lemon juice. In leucorrhœa, tannin will be found useful as a suppository, ten grains being mixed with a little tragacanth, and introduced up the vagina sufficiently high that during its solution and passage downwards, it may be smeared over the whole surface. It is also one of the best applications for severe salivation and for relaxed sore throat, attended with an increased secretion of mucus. But Mr. Druitt seems to think, also, that it is the best application for tooth-ache: a piece of information which he received from Mr. Tomes. "Let the patient thoroughly wash out the mouth with a solution of carbonate of soda in warm water; let the gum around the tooth or between it and its neighbours, be scarified with a *fine* lancet; then let a little bit of cotton-wool, imbued with a solution of a scruple of tannin and five grains of mastic in two drachms of æther, be put into the cavity, and if the ache is to be cured at all, this plan will put an end to it in nine cases out of ten." (68.)

The treatment of hydrocele has been dwelt upon so much of late, and so many different ways of radically curing the disease have been recommended, that a suspicion arises that none of them are unexceptionable. The injection of different liquids, such as the solutions of different salts, wine, brandy, and iodine, may certainly cause mischief

occasionally, by finding their way into the cellular tissue; but, nevertheless, this mode of treatment is found to be generally very successful and simple. Dr. Porter, of Dublin, however, prefers adopting the following method:—Having first tapped the sac to ascertain the nature of the disease, and allowed the fluid to re-accumulate, he makes an incision of an inch or an inch and a half in length, down to the tunica vaginalis, ascertaining if any considerable blood vessel is wounded, and then passes a bistoury into the cavity at one extremity of the incision, and brings the point out at the other extremity, dividing the intervening portion by rapidly withdrawing the knife. A tent of rolled lint, moistened with oil, and secured with a ligature, is then introduced. Next day the patient is bled from the arm; particularly if the scrotum show signs of inflammation. The tent is left to become loose, and drop out of itself, which usually takes place on the third or fourth day, and need not be replaced. Mr. Adams relates a case in which he cured the affection simply by withdrawing the liquid, and then pushing through the canula a camel's hair brush dipped in a strong solution of iodine, so as to smear it over the internal surface of the sac, and thereby promote the usual course of inflammatory action. (69.)

In the treatment of warty or condylomatous excrescences about the anus, perineum, labia, or scrotum, whether we regard the affection as a primary or secondary syphilitic affection, or simply as the result of uncleanliness and irritation, we shall probably find that the treatment recommended in a paper of Dr. Skae will be as good as any, viz., the local application of sulphate of copper every second day, and in some cases the crystal may be rubbed on the excrescences every day, and a lotion may also be frequently applied, composed of two or three grains of the sulphate of copper to the ounce of water. When ulcers are present they may be occasionally touched with nitrate of silver. There will often be seen in the mouth and about the fauces in these cases a whitish or milky surface, almost as if the parts had been slightly rubbed over with nitrate of silver. This will also be easily remedied by the application of the sulphate of copper or nitrate of silver. We should recommend, however, in these cases, that the treatment be not altogether local. Dr. Rose Cormack advises the use of the bichloride of mercury, which is no doubt an admirable remedy in many cases, when judiciously given. It should be given "in small and often-repeated doses, dissolved in a large quantity of water." In doses of one-twelfth of a grain, repeated every three hours, Dr. Cormack strongly recommends this form of mercury in many other obstinate forms of skin disease. In condyloma he also advises the internal administration of the iodide of potassium, and ioduret of iron; while his favourite local applications seem to be "nitric acid and chlorinated soda, lotions of various strength, creasote in the form of ointment (from 10 to 20 drops to an ounce of ointment), pitch ointment and the acid tar liquid." (71.)

It occasionally happens that a practitioner is called upon to ascertain whether a tumour, presenting at the orifice of the vagina, or

even further out, be an inverted uterus or a polypus; and if the tumour be very sensible, he might give it as his opinion that it was not a polypus, but the inverted womb. It happens, however, sometimes that a polypus grows and descends with the internal membrane of the womb before it, which renders its surface very tender and irritable.

If it be a polypus with a peduncle, it may easily be removed by ligature, or by excision,—but if it be not pedunculated, this operation would be difficult. Lisfranc's method might in this case be adopted, viz., the *enucleation* of the tumour, or the making of an opening in its envelope, and turning out the contents either with the finger or some other instrument, as a spatula. Lisfranc, in common with many other French writers, disapproves altogether of removing polypi by the ligature; and the Reviewer in the British and Foreign Medical Review agrees with this opinion in general, although there may be cases in which it is necessary to use the ligature;—"Thus, if a polypus of moderate size is completely included within the uterus, and is implanted high up, especially at the summit of the organ, and if the symptoms imperatively demand an operation, a ligature should be applied, if its application is possible, as it occasionally is when a sufficiently small peduncle can be detected: or if a patient is so exsanguine that the smallest loss of blood is to be dreaded, we should employ the ligature, unless the peduncle is too thick, or unless we are unable to bring it when bulky fairly within our reach, and pierce it with several needles, each armed with a double ligature, and thus tie it in two or more separate portions." How should we proceed if we felt an artery pulsating in the peduncle? Dupuytren recommended excision, having previously placed a ligature of reserve in case of hæmorrhage: Lisfranc disapproves of this, inasmuch as it would certainly lose its place; and instead he would at once place a ligature on the peduncle, and then excise the tumour at once, leaving the ligature on the peduncle for about eight or ten hours, and then removing it. If hæmorrhage should come on, he is convinced that plugging would be sufficient. If the artery felt in the peduncle was only a small one, he would not even apply a ligature, but excise the polypus at once, trusting to plugging, if required. (73.)

It is not necessary for us in this place to recapitulate all the remaining short articles on surgery. They are already as much condensed as is consistent with their utility.

Dr. Warden has satisfied himself by varied experiments, "that a totally reflecting prism placed in the angle of a bent canula, and illuminated by a second prism, will afford a satisfactory view of objects whose situation precludes the possibility of direct observation, such as the opening of the eustachian tube and the glottis, the position of foreign bodies detained in the throat, &c." Furthermore, he finds "that a diseased surface can be accurately inspected at the extremity of a straight tube of twelve inches long, and a quarter of an inch diameter," which will enable the surgeon to examine strictures and diseases of the rectum with more accuracy, as well as

diseases of the urinary organs; and that the latter circumstance is not impossible "may be inferred from the fact that the straight canula of the *brise-pierre* of Baron Heurteloup has a diameter of one-third of an inch."*

Dr. Henry Bennet draws our attention to the use of very large blisters in cases of inflammatory affections of the chest and other parts—a practice which is very much adopted in Paris, but not so much so in this country. M. Velpeau is accustomed to apply what are called *monster blisters*, from eight to sixteen inches square, sprinkled with powdered camphor, which he thinks prevents their irritating effects on the urinary organs. M. Gendrin, another eminent practitioner in that capital, is equally fond of this application. Dr. H. Bennet considers that these monster blisters may be used with safety in the acute as well as in the chronic stage of inflammation. M. Valleix uses what he calls the *magistral blister:* and we can readily believe that it is not only powerful but very efficacious. The formula is as follows:—"Take of powder of cantharides and of wheat flour each equal parts, and of vinegar a sufficient quantity to make a soft paste, to be applied to the skin."†

The artificial dilatation of the os uteri in a case of tedious labour is a subject which ought to be dwelt upon with caution. Many manipulations to facilitate and expedite a labour may be perfectly safe when exercised by an experienced accoucheur, but with a young and inexperienced practitioner they would be unwarrantable and dangerous. This remark will apply especially to the artificial dilatation of the os uteri. We should be very careful, therefore, how we recommended this practice, for fear of the advantage which might be taken of it by the inexperienced young man.

There are numerous cases, however, in which the experienced practitioner may do this with perfect impunity, and with the effect of considerably expediting the first stage of labour. Dr. Hamilton, of Edinburgh, maintained that this was a practice which ought frequently to be adopted. Dr. Breen brings the subject before us in an interesting paper in which he describes his mode of procedure. As a general rule, he says the dilatation ought not to commence till labour has existed for eight or ten hours, when there will have been time enough to show what nature has done and intends to do. "Two fingers are to be introduced either between the os uteri and unruptured membranes; or, if ruptured, between the os and presenting part of the child. The fingers are to be used, either for the purpose of dilatation, or as a wedge to resist the coming down of a flap of the cervix of that viscus. Above all things it is to be particularly kept in mind that the fingers are to be quiescent, except during a pain, and to be used only during the most severe portion of this action. By this proceeding no additional suffering will be caused to the patient. About two hours will usually be found sufficient to obliterate the undilated cervix, but the attendant need

* See Med. Gazett May 24, 1844. † See Lancet, August 31, 184

not be anxious to complete this measure within so short a time." This remark of Dr. Breen may be improved. The case in which such an operation is generally required is in a first labour, and where the anterior lip of the os uteri is a good way back. Now in a first case the external parts are so tight, that if one finger be sufficient, it certainly would be better than using two; and this we think may generally be sufficient, and in many cases we do not think that two fingers could be used with any degree of efficiency, except when the os uteri was low down, and either pointing directly downwards, or downwards and forwards. A better plan, we consider, is to introduce the index finger upwards and backwards, so as to reach the os, then to hook it on the anterior lip, and very cautiously dilate this towards the symphysis pubis, giving the finger a sweep now and then, completely round the orifice, so as to dilate the whole; then to wait for the pain, and when this comes on, to place the point of the finger on the vertex of the child, so as to make a kind of wedge or inclined plane for the anterior lip to press upon. This process, however, is only warrantable in the hands of an experienced practitioner; and we should by no means recommend the young practitioner to intermeddle with the part. (116.)

The position of the parturient woman is perhaps too generally on the left side. It is a very convenient position in many repects, and particularly well adapted to the use of the practitioner's right hand; but there are cases in which this position is not the best. Dr. Smith affirms that the direction of the brim of the pelvis varies considerably in different women, and that the axis of the pelvis may be materially altered by the different positions, such as bending backwards and forwards. We grant that this may be the case in a very slight degree, but we doubt whether it can be so much altered as Dr. Smith states it to be. When, however, there is reason to believe that the brim of the pelvis is more vertical than usual, it is evident that the common position of the woman on her left side, and bending forwards, is not the best one—in this case it will perhaps be an improvement to cause her to take a more straight or even backward position. (118.)

The editor of the Medical Gazette mentions a singular process which was adopted near Edinburgh, at the suggestion of Mr. Dick, the veterinary surgeon, to expedite the delivery of a cow. The animal had been in labour a considerable time, and was nearly exhausted; six to eight quarts of tepid water were now injected into the uterus, which in five minutes caused such vigorous pain that the animal was speedily released. This plan has since been adopted in the human subject, by a surgeon, in a case where nothing but the long forceps could have effected delivery. He injected about a quart of tepid water, with similar success. (122.)

INDEX TO VOL. X.

The Index to this as well as the Indices to all the preceding Volumes, contain references of three descriptions, viz.: to "Names of Authors," "Particular Medicines," but more particularly to "Diseases"—so that when the Practitioner is in attendance on any case he may refer to the different indices or to the "General Index" in the 9th Vol. and he will be able in a moment to ascertain what papers have been written on the subject since 1840.

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